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BIRDS

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MERRY CHRISTMAS

FROM

MOUNT PLEASANT

Richard & Mari Smith
& Family

PROCEEDINGS

OF

The Newport Natural History Society,

1889-90.

DOCUMENT VII.

A Catalogue of the Birds of the Virginias,

BY WM. C. RIVES, M. A., M. D.

NEWPORT, R. I.;
PRINTED FOR THE SOCIETY BY T. T. PITMAN,
OCTOBER, 1890.

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"*There is no Country more remarkable for the variety of Birds in it than Virginia, where the Woods and Groves in the Spring, Summer, Autumn, and almost all the year are render'd as delightful by the Musick of their feather'd Quires, as by the Coolness of their shades, or the fragrancy of their Flowers.*" Oldmixon. The British Empire in America. London, 1708, Vol. 1, p. 312.

PREFACE.

Since the publication of the list in Jefferson's Notes, no catalogue, purporting to treat of the birds of Virginia as a whole, has, I believe, appeared. The one here presented is based upon personal observation in different localities, especially in Albemarle County, and upon the various papers already published, together with several other sources of information of which I have been able to avail myself. As the fauna of West Virginia does not differ very markedly from that of its sister state, and as the separation between the two has been of such recent origin and was made chiefly for political rather than topographical considerations, I have included in the catalogue the birds to be found in both; the notes upon the water birds, however, principally relate to eastern Virginia, our knowledge of the West Virginia species being to a considerable extent a matter of inference.

I would here express my obligations to those gentlemen who have been kind enough to favor me with their aid, of whom I would mention especially Dr. C. Hart Merriam and Dr. A. K. Fisher of the Division of Economic Ornithology and Mammalogy, U. S. Department of Agriculture, Washington, D. C., who besides assisting me in many ways have kindly allowed me to examine the local reports on ornithology returned by various observers in Virginia and West Virginia in answer to the circulars issued by the Department and by the Committee on Migration of the American Ornithologists' Union. I have also received most valuable information with regard to the birds of the Eastern Shore from Captain Charles H. Crumb of the U. S. Life Saving Station at Cobb's Island, an excellent ornithologist, who has devoted much attention to the subject, and am indebted for other important assistance

to Lieutenant Wirt Robinson, 4th U. S. Artillery. To Professor J. A. Allen and Mr. Frank M. Chapman of the American Museum of Natural History, N. Y., my thanks are due for their kindness in allowing me free access to the library and ornithological collections of that Institution. This little work is also associated in my mind with unfailing memories of one who was my loved companion in many of my field excursions.

The list is of course deficient in many respects, but will serve to furnish a general knowledge of the characteristics of the Virginian avifauna; much use it will be observed has been made of the writings of the distinguished naturalists at Washington, who have so thoroughly studied the ornithology of the District of Columbia and the adjacent parts of Virginia.

W. C. R.

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EARLY ACCOUNTS OF THE BIRDS OF VIRGINIA.

Although no systematic treatise upon the birds which are found in Virginia is to be met with before Mark Catesby's important work, published in 1731, which did not relate exclusively to the birds of the State, yet from the times of the settlement at Jamestown in 1606 to the early part of the present century, we find, in the works which have come down to us from the earlier writers on Virginia, as well as from the travellers of later date, constant allusions to the great abundance of game, and mention made of many of the more conspicuous of our other birds. These accounts, though usually brief and unscientific, and in many cases fragmentary and incidental, are not devoid of interest, and throw considerable light upon the former abundance of several species.

The most complete of the earliest accounts of the Virginia birds given by the Jamestown colonists (not including the writings of Thomas Hariot* a member of the earlier colony established by Sir Richard Grenville on Roanoke Island, North Carolina, in 1585), is that of William Strachey,† 1610-12 which seems to have been overlooked by ornithological writers, and reads as follows: "Likewise as they have fruicts and beasts, so have they fowles and that great store. Of birdes, the eagle is the greatest devourer and many of them there: there be divers sortes of hawkes, sparhawkes, laneretts, goshawkes, falcons and ospreys; Turkeys there be great store, wild in the woods, like phesants in England forty in a company as big as our tame here, and yt is an excellent fowle and so passing good meat, as I maye well saie, yt is the best of any kind of flesh which I have ever yet eaten there. Partridges there are little bigger then our quailes! I have knowne of our men to have killed them with their small shott, sometime from off a tree five or six at a shoot. Cranes, white and grey; herons, both grey and white; woosells, or black byrds, with redd shoulders; thrushes, and divers sorts of small byrdes, some carnation, some blew, and some other straunge

*A Briefe and true report of the new found land of Virginia, etc., Frankfort on the Main, 1590. Reprinted, New York, 1871.

†The Historie of travaile into Virginia Brittannia by William Strachey, Gent. London, printed for the Hakluyt Society, 1849.

kyndes, to us unknowne by name. In winter there are great store of swannes, geese, brants, duck, widgeon, dottrell, oxeyes, mallard, teal, sheldrakes, and divers diving fowles, and of all these sortes that aboundance, as I dare avowe yt, no country in the world may have more. Parakitoes I have seen manie in the winter, and knowne divers killed, yet be they a fowle most swift of wing, their winges and breasts are of a greenish cullour, with forked tayles, their heades, some crymsen, some yellowe, some orange-tawny, very beautifull. Some of our colonie who have seene of the East Indian parratts, affirm how they are like to that kynde, which hath given us somewhat the more hope of the nerenes of the South Sea, these parratts, by all probability, like enough to come from some of the countryes upon that sea. A kind of wood-pidgeon we see in the winter time and of them such nombers, as I should drawe (from our homelings here, such who have seene, peradventure, scarce one more then in the markett) the creditt of my relation concerning all the other in question, yf I should expresse what extended flocks, and how manie thousands in one flock, I have seen in one daie, wondering (I must confesse) at their flight, when like so many thickned clowdes, they (having fed to the norward in the daye time) retourne againe more sowardly towards night to their roust; but there be manie hundred witnesses, who maie convince this my report yf herein yt testifieth an untruth."

Similar but shorter lists are given by Capt. John Smith* and Raphe Hamor† the former emphasizing the comparative scarcity of birds in summer and the latter mentioning a few kinds not referred to by the others, while he is also the first to speak of "Turckie Bussards." At a later period, the following list is also given by an early writer:‡ "Birds are these, viz., above 25

*A Map of Virginia With a Description of the Countrey, the Commodities People, Government and Religion. Written by Captaine Smith, sometime, Governour of the Countrey, Oxford, 1612. Also reprinted in "The Generall Historie of Virginia, New England and the Summer Isles." The Second Book, 1624.

†A True Discourse of the present estate of Virginia, till 18 June, 1614 by Raphe Hamor the yonger, London 1615.

‡A Perfect Description of Virginia: being, a full & true Relation of the present State of the Plantation, their Health, Peace & Plenty: the number of people with their abundance of Cattell, Fowl, Fish &c. London, printed for Richard Wodenoth, at the Star under Peters Church in Cornhill, 1649. (Force's Historical Tracts Vol. 2, No. VIII.)

severall kinds: 1 Eagles, 2 Hawkes, of six or severall kinds, 3 Parteridges, 4 Wild Turkies, some weighing sixtie pound weight, 5 Red Birds, that sing rarely, 6 Nightingales, 7 Blue Birds, smaller than a Wren, 8 Black Birds, 9 Thrushes, 10 Heath Cocks, 11 Swannes, 12 Cranes, 13 Hernes, 14 Geese, 15 Brants, 16 Ducks, 17 Widgeons, 18 Dottrells, 19 Oxeyes, 20 Parrots, 21 Pidgeons, 22 Owles. Many more that have no *English* Names; for one called the Mock-bird, that counterfeits all other severall *Birds* cryes and tunes."

Thomas Glover* (1676) writes as follows: "On the Bay [Chesapeake] and Rivers feed so many wild fowl, as in winter time they do in some places cover the water for two miles; the chief of which are wild *Swans* and Geese, *Cormorants*, Brants, *Shield-fowl*, *Duck* and *Mallard*, Teal, Wigeons, with many others. * * *

The Fowls that keep the Woods are wild Turkies, Turkie Buzzards, Turtle-Doves, Partridges, Hawks of several sorts, with many others of less note. There are also divers kinds of small Birds, whereof the Mocking-bird, the Red-bird and Humming-bird are the most remarkable; the first, for variety and sweetness of notes, the second for his colour, and the last for the smalness of his body. As to the Mocking-bird besides his own natural notes, which are many and pleasant, he imitateth all the birds in the woods, from whence he taketh his name; he singeth not only in the day, but also at all hours in the night, on the tops of the Chimneys; he is strangely antick in his flying, sometimes fluttering in the air with his head right down and tail up, other times with his tail down and head up; being kept tame he is very docible. The Red-bird, as I hinted before taketh his name from his colour, being all over of a pure blood red. The Humming-bird taketh his name from the noise he makes in flying: This is of divers colours, and not much bigger than a Hornet and yet hath all the parts of a bird entire."

From these extracts we observe, as might be expected that of the more striking individual species, the Red-winged blackbird

*An Account of Virginia, its Scituation, Temperature, Productions. Inhabitants and their manner of planting and ordering, Tobacco etc. Communicated by Mr. Thomas Glover an ingenious Chirurgion that hath lived some years in that Country.—Philos. Trans. No. 126, June 20, 1676, pp. 626 and 631.

Agelaius phœniceus at once attracted the attention of the colonists from the conspicuous colours of the male. Prof. Goode* in his most interesting and instructive address states that Capt. John Smith is the first to speak of this bird, but besides the reference made to it by Strachey there is mention made of "Black Birds with crimson wings" in a fragment by another contemporaneous writer.† The immense flocks of Wild Pigeons, *Ectopistes migratoria* such as are described in the above quotation from Strachey are referred to in similar terms by several other authors among them Hamor. At a subsequent date the following incidental allusion is made by an unknown writer.‡

"Another [prodigy] was fflights of pigeons in breadth nigh a quarter of the midhemisphere and of their length was no visible end; whose weights brake down the limbs of large trees whereon these rested at nights, of which the ffowlers shot abundance and eat 'em; this sight put the old planters under the more portentous apprehensions, because the like was seen (as they said) in the year 1640 when th' Indians committed the last massacre, but not after, untill the present year 1675." A similar account of their abundance is given in the letter of Clayton soon to be quoted and afterwards by Col. Byrd (Westover Mss. p. 57) and still more recently by Audubon and Wilson.

Regarding the Carolina Parrot, *Conurus carolinensis*, we have the detailed description of Strachey given above, the brief allusions by Capt. John Smith to "Parrats" and by Hamor to "Parakertoths," and it is given in the list of 1649 above quoted, (a further reference to "most rare coloured Parraketoes" being made on another page of the same document,) showing that the species was well known. Col. Byrd writing in 1728–1736 speaks as follows§ "Very often, in autumn when the apples begin to

*The Beginnings of Natural History in America. An Address delivered at the sixth anniversary meeting of the Biological Society of Washington By G. Brown Goode, President of the Society, Washington 1886.

†Observations gathered out of a Discourse of the Plantation of the Southerne Colonie in Virginia by the English 1606, written by that Honorable Gentleman Master George Percy. Purchas IV. 1685–1690, Ed. 1625. Reprinted in Arber's edition of the Works of Capt. John Smith p. LVII.

‡The Beginning, Progress and Conclusion of Bacon's Rebellion in Va. in the years 1675 and 1676, by T. M. Force's Historical Tracts Vol. I.

§The Westover Manuscripts containing the history of the dividing line betwixt Virginia and North Carolina; A journey to the land of Eden 1733; and a progress to the mines. Written from 1728 to 1736, and now first published

ripen, they [the farmers of North Carolina] are visited with numerous flights of paroquets, that bite all the fruit to pieces in a moment, for the sake of the kernels. The havoc they make is sometimes so great that whole orchards are laid waste in spite of all the noises that can be made or mawkins that can be dressed up to fright them away. These ravenous birds visit North Carolina only during the warm season, and so soon as the cold begins to come on, retire back towards the sun. They rarely venture so far north as Virginia except in a very hot summer, when they visit the most southern part of it." The Wild Turkey and Virginia Partridge are of course to be at once identified from their descriptions and the writers were evidently acquainted with the Cardinal and Bluebird with the former of which may have been confounded the male Summer Red-bird and with the latter the Blue Grosbeak and Indigo bird. Other species which appear to have soon become objects of special attention are the Mocking-bird, Humming-bird, Fish Hawk, Bald Eagle and Turkey Buzzard. It is somewhat surprising that there appears to be no definite mention of the Whip-poor-will previous to Catesby's work.

In 1688 was published a most interesting account and much fuller than any that had yet appeared by the Revd. John Clayton, Vicar of Crofton* who made a journey to Virginia in 1685. Besides speaking of the different kinds in general terms he refers in more or less detail to thirty or forty species which are readily identified from his descriptions, several of which he seems to have been the first to describe such as the Meadow Lark, Night Hawk and others. It is noteworthy to find that he mentions the Snowy Owl which is a rare bird so far south.

The following very full extracts will be of interest: "There are three sorts of Eagles,† the largest I take to be that they call

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By William Byrd of Westover—Petersburg: Printed by Edmund and Julian C. Ruffin. Another edition of this work with additional matter was published at Richmond in 1866.

*A letter from Mr, John Clayton Rector of Crofton at Wakefield in Yorkshire to the Royal Society May 12th 1688, Giving an Account of several Observables in Virginia, and in his voyage thither more particularly concerning the air—Phil. Trans. XVII & XVIII and in Miscellanea Curiosa Vol. III—Force's Historical Tracts Vol. III.

†Clayton doubtless here mistakes for several distinct species, the Bald Eagle *H. leucocephalus*, in different states of plumage.

the grey Eagle, being much of the Colour of our Kite or Glead. The second is the bald Eagle, for the Body and part of the Neck being of a dark brown, the upper part of the Neck and Head is covered with a white sort of down, whereby it looks very bald, whence it is so named. The third is the black Eagle resembling most the *English* Eagle, they build their Nests much after the manner of that Dr *Willoughby* describes, and generally at the top of some tall old Tree, naked of Boughs and nigh the River-side, and the People fell the Tree generally when they take the young; they are most frequently sitting on some tall Tree by the River-side, whence they may have a Prospect up and down the River, as I suppose to observe the fishing-Hawks; for when they see the fishing Hawk has struck a Fish, immediately they take Wing, and 'tis sometimes very pleasant to behold the Flight; for when the fishing-Hawk perceives her self pursued, she wil scream and make a terrible noise, till at length she lets fall the Fish to make her own Escape, which the Eagle frequently catches before it reach the Earth or Water.

These Eagles kill young Lambs, Pigs *&c.* This fishing-Hawk is an absolute Species of a Kings-fisher, but full as large or larger than our Jay, much of the Colour and Shape of a Kings-fisher tho' not altogether so curiously feather'd; it has a large Crop as I remember; there is a little Kings-fisher much the same in every respect with ours * * * There's both a brown Owl and White Owl, much what as large as a Goose, which oftens kills their Hens and Poultry in the Night; the white Owl* is a very delicate feathered Bird, all the Feathers upon his Breast and Back being Snow-white and tipp'd with a punctal of Jet-black: besides there is a Barn Owl much like ours; and a little sort of Scritch Owl. The night Raven, which some call the *Virginia* Bat,† is about the Bigness of a Cuckow, feathered like them but very short, and short Leg'd, not discernable when it flies, which is only in the Evening scudding like our Night Raven. There's a great ravenous Bird that feeds upon Carrion, as big very nigh as an Eagle, which they call a Turky Bustard, its feathers are of a duskish black, it has red Gills, resembling those of a Turky,

* *Nyctea nyctea.*
† *Chordeiles virginianus.*

whence it has its name; it is nothing of the same sort of Bird with our *English* Turky Bustard, but is rather a Species of the Kites, for it will hover on the Wing something like them, and is carnivorous; the Fat thereof dissolved into an Oil, is recommended mightily against old Aches and Sciatica Pains.*

The *Pica Glandaria* or Jay is much less than our *English* Jay, and of another colour, for its' all blue where ours is brown, the Wings marbled as curiously as ours are, it has both the same Cry and sudden jetting Motion.

There are great Variety and Curiosity in the Woodpeckers, there's one as big as our Magpye, with blackish brown Feathers, and a large scarlet Tuft on the Top of the Head:† There are four or five sorts of Wood-peckers more, variegated with green, yellow and red Heads, others spotted black and white, most lovely to behold. * * *

Their mocking Birds may be compared to our singing Thrushes being much of the same Bigness; there are two sorts,‡ the grey and the red, the gray has Feathers much of the Colour of our grey Plovers with white in the wings like a Magpye; this has the much softer Note, and will imitate in its singing, the Notes of all Birds that it hears, and is accounted much the finest singing Bird in the World. * * * Of *Virginia* nightingale, or red Bird, there are two sorts,§ the Cocks of both sorts are of a pure Scarlet, the Hens of a duskish Red; I distinguish them into two sorts, for the one has a tufted Cops on the head, the other is smooth-feather'd. I never saw a tufted Cock with a smooth-headed Hen, or on the contrary; they generally resorting a Cock and Hen together, and play in a Thicket of Thorns or Bryars in the winter, nigh to which the Boys set their Traps, and so catch them and sell them to the Merchants for about six Pence apiece; by whom they are brought for *England;* they are something less than a Thrush. * * * They have a Lark nothing differing from our common Lark; they have another Bird which they call a Lark‖ that is much larger, as big as a Starling;

*T. Anburey (Travels in the interior parts of America Vol 2 p. 434) mentions a similar belief.

†*Ceophlœus pileatus.*

‡*Mimus polyglottus; Harporhynchus rufus.*

§*Cardinalis cardinalis; Piranga rubra.*

‖*Sturnella magna.*

it has a soft Note, feeds on the Ground, and, as I remember, has the specifical character of a long Heel; it is more inclined to yellow, and has a large half Moon on its breast of yellow; if it have not a long Heel, *Quære*, whether a Species of the Yellow-hammer.

There be wild Turkies extream large; they talk of Turkies that have been kill'd, that have weigh'd something better than 38 Pound; they have very long Legs, and will run prodigiously fast. I remember not that ever I saw any of them on the Wing, except it were once: Their Feathers are of a blackish shining Colour, that in the Sun shine like a Dove's Neck, very specious * * *

Partridges there are much smaller than ours, and resort in Covies as ours do; their Flesh is very white, and much excels ours in my mind, *Sed de gustibus non est disputandum.* Their Turtle-Doves are of a duskish blue Colour, much less than our common Pigeon; the whole Train is longer much than the Tails of our Pigeons, the middle Feather being the longest. There is the strangest Story of a vast Number of these Pigeons that came in a Flock a few Years before I came thither; They say they came thro' *New England*, *New York* and *Virginia*, and were so prodigious in Number as to darken the Sky for several Hours in the place over which they flew, and brake massie Boughs where they light; and many like things which I have had asserted to me by many Eye-witness of Credit, that to me it was without doubt, the Relators being very sober persons, and all agreeing in a Story: Nothing of the like ever happen'd since, nor did I ever see past ten in a Flock together that I remember. I am not fond of such Stories, and had suppressed the relating of it, but that I have heard the same from very many. * * *

The Snow-bird, which I take to be much the same with our Hedge-sparrow; this is so called because it seldom appears about Houses but against Snow or very cold Weather.

The humming Bird that feeds upon the Honey of Flowers: I have been told by some Persons that they have kept of these humming Birds, alive and fed them with Water and Sugar: they are much the smallest of all Birds, have long Bills and curious coloured Feathers, but differ much in Colour. Herons three or four several sorts, one larger than the *English*, feathered much like a *Spanish* Goose. Another sort that only comes in Summer

Milk white, with red Legs very lovely to behold. The Bittern is there less than in *England*, and does not make that sounding Noise that ever I heard. * * * The Tewits* are smaller than the *English*,† and have no long Toppins, but just like a young one that begins to fly."

Beverley's History of Virginia‡ published in 1705 speaks thus of the Birds in the following passage. "As in Summer, the Rivers and Creeks are fill'd with Fish, so in Winter they are in many Places cover'd with Fowl. There are such a Multitude of Swans, Geese, Brants, Sheldrakes, Ducks of several Sorts, Mallard, Teal, Blewings, and many other Kinds of Water-Fowl that the plenty of them is incredible. I am but a small Sports-man, yet with a Fowling-Peice, have kill'd above Twenty of them at a shot. In like manner are the Mill-Ponds, and great Runs in the Woods stor'd with these Wild-Fowl at certain seasons of the Year. The Shores, Marshy Grounds, Swamps, and Savanna's are also stor'd with the like Plenty of other Game, of all Sorts, as Cranes, Curlews, Herons, Snipes, Woodcocks, Saurers, Ox-eyes, Plover, Larks, and many other good Birds for the Table that they have not yet found a name for." The Mocking Bird and its habits is described in the following extract: "the merry Birds too, join their pleasing Notes to this rural Consort, especially the Mock-birds, who love Society so well, that whenever they see Mankind, they will perch upon a Twigg very near them, and sing the sweetest wild Airs in the World: But what is most remarkable in these Melodious Animals, they will frequently fly at small distances before a Traveller, warbling out their Notes several Miles an end, and by their Musick make a Man forget the Fatigues of his Journey."

Beverly gives in a plate of Indians fishing (facing p. 34 Book II) a representation of two Bald Eagles capturing fish from the Fish Hawks and, like Clayton, an interesting description as follows of the scene subsequently so graphically depicted, in the classic passage in Wilson's Ornithology. "'Tis a good Diversion to observe the Manner of the Fishing-Hawks preying upon Fish,

Ægialitis vocifera.

†*Vanellus cristatus.*

‡The History and Present State of Virginia—In Four Parts. By a Native and Inhabitant of the Place—London 1705.

which may be seen every fair Day all the Summer long and especially in a Morning.

At the first coming of the Fish in the Spring, these Birds of Prey are surprisingly eager. I believe in the Dead of Winter, they Fish farther off at Sea, or remain among the craggy uninhabited Islands, upon the Sea Coast. I have often been pleasantly entertain'd, by seeing these Hawks take the Fish out of the Water, and as they were flying away with their Quarry, the bald Eagles take it from them again. I have often observ'd the first of these hover over the Water, and rest upon the Wing some Minutes together, without the least change of Place, and then from a vast Height, dart directly into the Water, and there plunge down for the Space of Half a Minute, or more, and at last bring up with him a Fish, which he could hardly rise with; then having got upon the Wing again, he wou'd shake himself so powerfully that he threw the Water like a Mist about him; afterwards away he'd fly to the Woods with his Game, if he were not overlook'd by the Bald-Eagle, and robb'd by the Way, which very frequently happens. For the Bald-Eagle no sooner perceives a Hawk that has taken his Prey, but he immediately pursues, and strives to get above him in the Air, which if he can once attain, the Hawk for fear of being torn by him lets the Fish drop, and so by the Loss of his Dinner, compounds for his own Safety.

The poor Fish is no sooner loosed from the Hawk's Tallons, but the Eagle shoots himself with wonderful Swiftness, after it, and catches it in the Air, leaving all further pursuit of the Hawk, which has no other Remedy but to go and fish for another.

Walking once with a Gentleman in an Orchard by the River-side early in the Spring, before the Fish were by us perceiv'd to appear in Shoal-Water, or near the Shores, and before any had been caught by the People; we heard a great Noise in the Air just over our Heads, and looking up, we see an Eagle in close pursuit of a Hawk, that had a great Fish in his Pounces. The Hawk was as low as the Apple-Trees, before he wou'd let go his Fish, thinking to recover the Wood, which was just by, where the Eagles dare never follow, for fear of bruising themselves. But, notwithstanding the Fish was dropp'd so low and tho' it did not fall above Thirty Yards from us, yet we with our Hollowing, Running, and casting up our Hats, could hardly save the Fish

from the Eagle, and if it had been dropp'd Two Yards higher he wou'd have got it: But we at last took Possession of it alive, carried it Home, and had it dressed forthwith. It serv'd Five of us very plentifully, without any other Addition, and some to the Servants. This Fish was a Rock near Two foot long, very fat, and a great Rarity for the Time of Year, as well as for the Manner of its being taken. These Fishing-Hawks, in more plentiful Seasons, will catch a Fish, and loiter about with it in the Air, on purpose to have a Chace with an Eagle; and when he does not appear soon enough, the Hawk will make a sawcy Noise, and insolently defie him. This has been frequently seen, by Persons who have observ'd their Fishings."

Beverley appears to be the first writer to make mention of "Saurers," concerning which birds, the following interesting fragment is taken from a work by the Rev. Andrew Burnaby.*

"I departed from Williamsburg, Oct. 1, 1759 in company with another gentleman; and we travelled that day about forty miles, to a plantation in King William county; beautifully situated upon a high hill, on the north side of Pamunky river. A little below this place stands the Pamunky Indian town; where at present are the few remains of that large tribe; the rest having dwindled away through intemperance and disease.

They live in little wigwams or cabins upon the river; and have a very fine tract of land of about 2000 acres which they are restrained from alienating by act of assembly. Their employment is chiefly hunting or fishing for the neighbouring gentry. They commonly dress like the Virginians and I have sometimes mistaken them for the lower sort of that people. The night I spent here, they went out into an adjoining marsh to catch soruses; and one of them, as I was informed in the morning, caught near a hundred dozen. The manner of taking these birds is remarkable. The sorus is not known to be in Virginia except for about six weeks from the latter end of September: at that time they are found in the marshes in prodigious numbers, feeding upon the wild oats, at first they are exceedingly lean, but in a

*Travels Through the Middle Settlements in North America in the years 1759 and 1760. With Observations upon the State of the Colonies—By the Rev. Andrew Burnaby M. A. Vicar of Greenwich—London printed for T. Payne at the Mews-Gate, 1775.

short time grow so fat, as to be unable to fly: in this state they lie upon the reeds, and the Indians go out in canoes and knock them on the head with their paddles. They are rather bigger than a lark, and are delicious eating. During the time of their continuing in season, you meet with them at the tables of most of the planters, breakfast, dinner and supper." It may interest the reader to learn that the "sorus" is still pursued in much the same fashion in the locality referred to, by the surviving descendants of the Pamunky tribe.

Thomas Jefferson, who although occupied with the more important matters which claimed his attention took no little interest in Natural History,* in his Notes on the State of Virginia published in 1781 gives a list of 125 birds chiefly taken from Catesby, but as the western limits of Virginia at the date the book was written extended along the Ohio and Mississippi and included the present State of Kentucky, a number of birds are included by him which are not Virginian. This list, although the author was familiar with many of the native birds, is, however, plainly not the result of much personal observation and has in itself no particular interest.

In the travels of Isaac Weld in 1795–97 and of the Marquis de Chastellux 1780–82 mention is briefly made of a few species of birds noticed in Virginia and there are a few unimportant and incidental allusions to be gathered from the works of one or two other travellers.

The Valley of Virginia was not settled before 1732 and West Virginia not until later, so that no early writings upon the birds of these regions exist.

Much of West Virginia remains to the present day a wild forest covered region giving shelter to most of the wood loving birds of Eastern Virginia and still abounding in Wild Turkeys, Ruffed Grouse and at certain seasons, Wild Pigeons. The Histories of these parts of the Virginias contain nothing of importance upon their ornithology and in fact Mr. Scott's paper (Birds of Kanawha Co.) appears to have been the first to throw definite light upon the subject. In concluding this sketch† some reference

*See Jefferson as a Naturalist.—Magazine of American History, April, 1885.

†I would refer those desirous of further study of the early writings on the subject of Natural History in America, to Dr. Coues' Bibliography of North Ameri-

should not be neglected to the very important work of Bartram (Travels through North and South Carolina) published in 1791, which contains a catalogue of the birds of the Eastern United States and other important ornithological matter, and though this list is not limited to those occuring in Virginia it must, like Catesby's treatise, have tended to convey valuable information regarding the birds of the State.

The first half of the present century saw the appearance of the great works of Audubon and Wilson which were followed by the further development of American Ornithology that has made such rapid progress in recent years.

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can Ornithology contained in his Birds of the Colorado Valley and to the Historical Preface to his Key to North American Birds; Also to the Address of Prof. Goode previously mentioned.

RECENT LITERATURE OF VIRGINIA ORNITHOLOGY.

Local catalogues of Virginia birds or other special papers relating to its ornithology are of modern date. In the following list of the more important publications are included the very valuable papers on the birds of the District of Columbia, which are practically the same as the birds of the north-eastern part of the State. These writings contain also many special references to the neighboring parts of Virginia. Many short notes or articles are also to be found in the pages of "The Auk," "Forest and Stream," "The American Field" and other periodicals while frequent allusions to Virginia are contained in several of the more general works on birds such as Audubon, Baird Brewer and Ridgway, and Trumbull's "Names and Portraits of Birds."

1862 (1) Annual Report of the Smithsonian Institution for 1861, pp. 399-421. List of Birds ascertained to inhabit the District of Columbia, with the times of arrival and departure of such as are non-resident, and brief notices of habits, etc. By Elliott Coues and D. Webster Prentiss.

1870 (2) Observations on the Fauna of the Southern Alleghanies. By E. D. Cope. American Naturalist, Vol. IV. pp. 395-399, 1870.

1873 (3) Partial List of the Summer Birds of Kanawha County West Virginia, with Annotations. By W. D. Scott. Proc. Bost. Soc. Nat. Hist. Vol. XV, pp. 219-230, Oct. 1872. [A list of eighty-six species with notes.]

1875 (4) The Vacation of an Ornithologist, being observations in spring on birds at Petroleum, Ritchie Co., West Virginia. By Ernest Ingersoll. Forest and Stream, Vol. IV, p. 358, 1875.

1876 (5) Some observations on the Birds of Ritchie County, West Virginia. By Wm. Brewster. Ann. Lyceum. Nat. Hist. N. Y., Vol. XI, pp. 129-146, June 1875. [An annotated list of one hundred species.]

1876 (6) Notes on birds found breeding on Cobb's Island, Va., between May 25th and May 29th 1875. By H. B. Bailey.

Bull. Nuttall Orn. Club. Vol. I. No. 1 January, 1876, pp. 24–28. [Notes on twenty-one species.]

1876 (7) Nesting of the Worm-eating Warbler. By Robert Ridgway. Field and Forest, Vol. I, p. 10, 1876.

1876 (8) Birds of the District of Columbia. By R. W. Shufeldt. Field and Forest, Vol. I, p. 79. [A list without notes of 67 permanent and winter residents.]

1876 (9) Schoolboys as Naturalists, list of birds observed at Leesburg, Va., in March and April by the pupils of a school there. By E. Ingersoll. Forest and Stream, Vol. VI, p. 163, 1876.

1877 (10) Notes on Forster's Tern. By P. L. Jouy. Field and Forest, Vol. II, p. 29, 1877.

1877 (11) Catalogue of the Birds of the District of Columbia, prepared by Pierre Louis Jouy with remarks on the Birds of the District by Drs. Coues and Prentiss. Field and Forest, Vol. II, 1877; also reprinted as a separate pamphlet. [A list without notes of 240 species.]

1877 (12) Our Washington Letter. By R. F. Boiseau. [Several articles in Forest and Stream, Vols. VIII and IX, 1877.]

1877 (13) Field Notes on some of the Birds of the District of Columbia. By P. L. Jouy. Field and Forest, Vol. III, p. 51, 1877.

1877 (14) Southern Notes at Randolph Macon College, Va. By Jesse T. Littleton. Forest and Stream, Vol. VIII. p. 224. 1877.

1880 (15) Description of the eggs of the Caspian Tern (*Sterna Caspia*). By Robert Ridgway, Bull. Nuttall Club, Oct. 1880, Vol. V. p. 221.

1881 (16) On Birds observed in Amelia County, Virginia. By Percy E. Freke. Scientific Proceedings of the Royal Dublin Society, Vol. III, Part III [An annotated list of 112 species].

1883 (17) Bulletin of the U. S. National Museum, No. 26. Avifauna Columbiana: being a list of Birds ascertained to inhabit the District of Columbia, with the times of arrival and departure of such as are non-resident, and brief notices of habits, etc. The second edition, revised to date and entirely re-written. By Elliott Coues, M. D. Ph. D., and D.

Webster Prentiss, A. M., M. D., Washington, 1883. [A list of 248 species with very full notes.]

1884 (18) Birds of the "Panhandle," W. Va. The Journal of Rev. W. E. Hill, from January to June (inclusive), 1883. Ornithologist and Oologist, Vol. 9, 1884.

1884 (19) Notes from Fairfax Co. Va. By H. K. Jamison. Ornithologist and Oologist, Vol. 9, 1884, pp. 144-145.

1884 (20) List of the Birds of Cobham, Va. By Wm. C. Rives, Jr., M. D., Newport, R. I., Davis & Pitman, 1884. [An annotated list of 128 species.]

1884 (21) Avifauna Columbiana. A Protest. By L. M. McCormick. The Auk, Vol. I, p. 396.

1885 (22) The Lesson of a Market, [Norfolk, Va.] By Geo. B. Sennett. Forest and Stream, Vol. XXIV, pp. 366–367.

1886 (23) Notes on Birds of the Salt Pond Mountain, Va. By Wm. C. Rives, Jr., M. D. The Auk, Vol. III, pp. 156–161.

1887 (24) Notes on Some Birds of Warwick County, Virginia. By Charles L. Phillips. Ornithologist and Oologist, Vol. 12, 1887, pp. 121–122.

1888 (25) An annotated list of Birds breeding in the District of Columbia. By Charles W. Richmond. The Auk, Vol. V, No. 1, pp. 18–25.

1888 (26) Additions to the Avifauna of Washington and vicinity. By Hugh M. Smith and William Palmer. The Auk, Vol. V, No. 2, pp. 147–148, 1888.

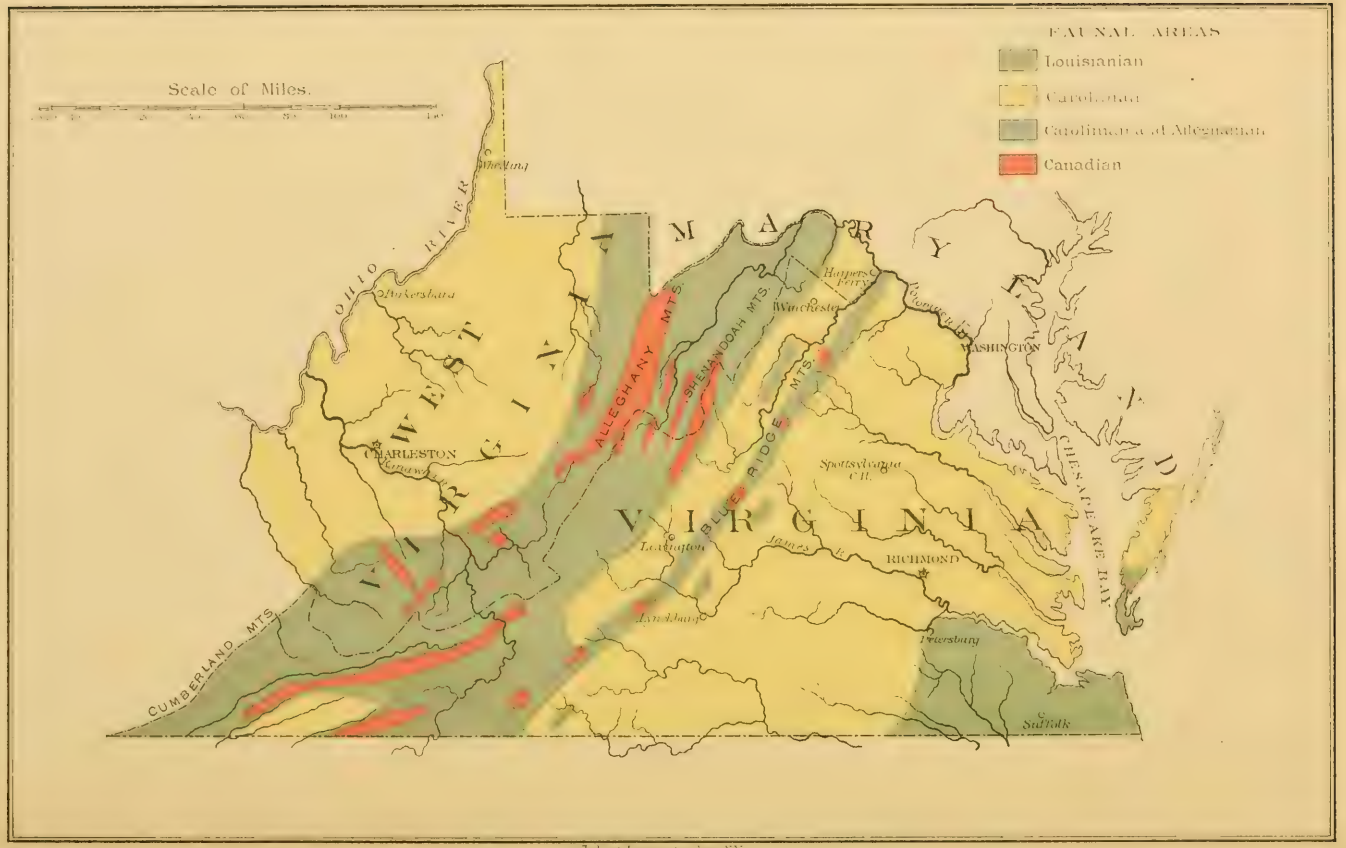
1888 (27) Nesting of the Prairie Warbler (*Dendroica discolor*) in the vicinity of Washington, D. C. By Elliott Baird Coues. The Auk, Vol. V, No. 4, pp. 405–408.

1888 (28) Bulletin No. 3. West Va. Agricultural experiment station at Morgantown, W. Va. December, 1888. Birds of West Va. By Wm. D. Doan. [A list of 200 species.]

1889 (29) Notes on the Birds of White Top Mountain, Virginia. By William C. Rives, Jr., M. D. The Auk, Vol. VI, No. 1, pp. 50-53.

1889 (30) Notes on some Albino Birds presented to the U. S. National Museum, with some remarks on Albinism. By Lieut. Wirt Robinson, Fourth Artillery, U. S. Army. Proceedings U. S. Nat. Museum for 1888, p. 413.

ORNITHOLOGICAL MAP OF THE VIRGINIAS.



INTRODUCTORY DESCRIPTION—THE ORNITHOLOGICAL POSITION OF THE VIRGINIAS.

According to the classification of Major Hotchkiss,* which has been generally adopted, there are seven great natural divisions of the Virginias, belts of country extending in a general direction from north-east to south-west and nearly parallel to each other. These are (1) Tidewater, (2) Middle, (3) Piedmont, (4) Blue Ridge, (5) The Valley, (6) Appalachia, (7) Trans-Appalachia (including the south-western counties of Buchanan, Dickenson and Wise, and nearly the whole of West Virginia). They vary in physical features, altitude and climate and as a natural consequence in the characteristics of their avifauna, though for ornithological purposes and in respect to climate, the second, third, and most of the fifth division might be classed together as Middle Virginia, and the fourth and sixth and parts of the fifth and seventh as the Mountain region, partly following the simpler arrangement of Martin.† East of the Blue Ridge which runs south-westerly through Virginia, the country (which includes the first three of the above mentioned divisions), is level, gradually rising as we proceed westward from the coast, the uniformity of its surface being, with some exceptions, only interrupted by the irregular chain which appearing under various names, such as the Bull Run, Clark's, South-west, Carter's, Findlay's, etc., Mountains, runs parallel to the Blue Ridge, for the most part about thirty miles to the eastward. Among the most elevated points in or near this range are the Tobacco Row Mountain in Amherst, 2938 feet high, and Bull Mountain in Patrick Country, 3216 feet.

The Blue Ridge itself enters Virginia at Harper's Ferry and continues up to the north-eastern corner of Floyd County as a single range: here it divides, the more easterly range being usually called the Blue Ridge, while the western division, to which Professor William B. Rogers showed the name of Blue Ridge

* Virginia, A geographical & political summary. Richmond, 1876, p. 4. Geography of Virginia by J. Hotchkiss—1878. The Virginias, Vol. VI, p. 124.
† A Gazetteer of Virginia. By Joseph Martin. Charlottesville, 1835, p. 17.

should on account of its geological formation more properly belong, is known under the names of Pilot Mountain, Mack Mountain, Poplar Camp Mountain and Iron Mountain and continues into Tenneseee as the Chilhowee Mountains.* The Balsam (5719 feet) and White Top Mountain (5673 feet) in Grayson County, the highest in the Virginias, are in close proximity to the Iron Mountain but form a diverging range, that continues into North Carolina as the Unaka or Smoky Mountains.

Between the Blue Ridge and North Mountain and their continuations, lies the Valley a limestone region about thirty miles wide. It is sub-divided into the Shenandoah Valley proper, (separated into two parts for a distance of fifty miles by the Massanutton range) and portions of the valleys of the James, Roanoke, New and Holston Rivers. Its altitude where the Shenandoah enters the Potomac is 242 feet. As we proceed southward along the line of the Shenandoah Valley and Norfolk & Western Railways, it gradually rises to the height of 1863 feet at the Augusta County summit, then sinks to 706 feet in the valley of the James. At the summit between the James and Roanoke rivers, the elevation is 1293 feet; at the Roanoke 825 feet. At the divide between the Roanoke and New rivers which separates the waters flowing into the Atlantic from those flowing into the Mississippi, the altitude is 2049 feet and at the New River itself 1780 feet. The Valley then rises to its highest elevation of 2594 feet at Mt. Airy summit and again gradually falls in the valley of the Holston to 1678 feet, at the Tennessee line.

To the westward of the Valley are irregular mountain ranges of the Appalachian system, alternating with valleys or plateaus of more or less extent, until we come to the comparatively level Trans-Appalachian region belonging to the valley of the Ohio. The waters of the region east of the Blue Ridge and of the northern portions of the Valley and Appalachia, flow into Chesapeake Bay or into Albemarle and Currituck Sounds, part of those of the south-western districts of the two latter divisions into the Ohio, the remaining part flowing into the Tennessee, while the streams and rivers of the Trans-Appalachian region find their way, with the exception of those forming the head waters of the Potomac, into the Ohio.

*The Virginias, Vol. IV. p. 180.

In respect to geological formation, the Tidewater is a Tertiary region, the Middle and Piedmont divisions are mainly Eozoic or Primary, portions of the former especially, being, however, Mesozoic. On its eastern slope, usually including its summit, the rocks of the Blue Ridge resemble those of the Piedmont region (epidotic), on the western, those of the Valley. The Valley is made up of Cambrian and Lower Silurian rocks mainly limestones.

The Appalachian country chiefly consists of Upper Silurian and Devonian rocks with some Carboniferous and Sub-carboniferous, while nearly the entire area of the Trans-Appalachian region is Carboniferous.

In the Tidewater region, the mean annual temperature according to locality is from 55 to 65 F.; in Central Virginia 50 to 60; in the Mountain region 40 to 55; in Western Virginia 50 to 60.

The physical and topographical features of the Virginias are thus so varied that the number of birds found is necessarily large. The noble estuary of Chesapeake Bay and the large rivers which empty into it, the islands along the eastern shore of Accomac and Northampton counties (though now largely depopulated of their feathered inhabitants in comparison with former times), the Great Dismal Swamp and waters of Princess Anne County furnish feeding grounds for Ducks, Geese, Swan, the numerous varieties of Waders, and the Gulls, Terns and Herons; the well wooded regions of eastern Virginia are filled with land birds while the Valley and West Virginia offer still other features which influence the bird distribution, and upon the high mountain tops birds are met with which in summer are confined to that region.

As the Flora of a country bears an intimate relation to its climate and fauna, brief mention may be made of the botanical features of the Virginias. It is more or less intermediate in character between that of the Northern and Southern Atlantic States and east of the Blue Ridge, with the exception of the warmer south-eastern portion, is similar in great measure to that of the District of Columbia, which has been very fully investigated.*

*Bulletin of the U. S. National Museum. No.22.

The general features of the forests of the two states have been thus described:* "The forests of Virginia, like those of the Carolinas and Georgia, fall naturally into three divisions, dependent upon the elevation and soil of the different parts of the state. The mountains and ridges of its western border are covered with a heavy growth of pine, hemlock, white oak, cherry,† yellow poplar, and other northern trees; over the region extending east of the mountains oaks, principally black oaks, once formed the prevailing forest growth; through these are now mingled long stretches of various pitch pines, occupying exhausted and barren soil once devoted to agriculture.

The eastern counties are covered with the forests of the Maritime Pine belt, generally confined to the Tertiary deposits of the coast and extending inland to the head of tide-water of the principal streams; along the western borders of this pine belt the forest growth is nearly equally divided between the pines and the broad-leaved species. The inaccessible mountain region in the south-western part of the state still contains immense quantities of the original oak, hickory, walnut, and cherry, the scanty population of these mountains having made but slight inroads upon the forests."

"The forests of West Virginia,‡ with the exception of the belt of pine and spruce§ confined to the high ridges of the Alleghany mountains are principally composed of broad-leaved trees, the most important of which are the white and chestnut oaks, the black walnut, the yellow poplar and the cherry. The white pine and spruce forests reach within the state their southern limit as important sources of lumber supply.

The forests have been largely removed from the counties bordering the Ohio river, and the most valuable hard wood timber, adjacent to the principle streams, especially black walnut, cherry and yellow poplar, has been culled in nearly every part of the State. But slight inroads, however, have yet been made into the magnificent body of hard wood timber covering the extreme

*Tenth census of the U. S.–1880 Vol. IX. Forest trees of North America, p. 511.

†*Prunus serotina.*

‡Tenth Census. Vol. IX, p. 511.

§*Picea nigra.*

southern counties, which still contain vast quantities of oak, cherry and poplar. The black walnut found scattered everywhere in West Virginia is least plentiful in the north-western and Ohio River counties, and most abundant along the upper waters of the rivers flowing into the Ohio through the south-western part of the State. Yellow poplar is found throughout the State and is still abundant about the head waters of nearly all the principal streams. Large bodies of cherry are found in Greenbrier, Nicholas, Webster and other counties immediately west of the mountains, and a large amount of hemlock is scattered through the valleys and ravines of the north-eastern part of the State and along the western slopes of the Alleghanies."

Entering into fuller detail* many species of oaks are common in Eastern Virginia; of these may be mentioned the white oak, *Quercus alba*, the chestnut oak, *Quercus prinus*, the pin oak, *Quercus palustris*, the post oak, *Quercus obtusiloba* the black-jack oak, *Quercus nigra*, the Spanish oak, *Quercus falcata* and the less abundant *Quercus bicolor*, the beautiful swamp white oak. Hickories (*Carya*) are abundant, and, as we have seen, the poplar or tulip tree, *Liriodendron tulipifera*, which in the mountain region attains a great height, and the black walnut, *Juglans nigra*, are well known. Among other common trees may be mentioned the chestnut, *Castanea vulgaris* var. *Americana*, the beech, *Fagus ferruginea*, the red and white maples, *Acer rubrum* and *dasycarpum*, the sycamore, *Platanus occidentalis*, the birch, *Betula nigra*, the gum, *Nyssa multiflora*, the sweet gum, *Liquidambar styraciflua*, the locust, *Robinia pseudacacia*, which is said to reach its greatest development on the western slopes of the mountains of West Virginia, the yellow pine, *Pinus mitis*, and the persimmon,† *Diospyros virginiana*. Of the smaller trees, the dogwood *Cornus Florida* and the red-

*See also Bulletin N. 22 U. S. Nat. Museum, p. 48.

†Capt. John Smith's description of the persimmon has been often quoted. Strachey gives the following: "They have a plomb which they call pessemmins, like to a medler, in England, but of a deeper tawnie cullour; they grow on a most high tree. When they are not fully ripe, they are harsh and choakie, and furre in a man's mouth like allam, howbeit, being taken fully ripe, yt is a reasonable pleasant fruict, somewhat lushious. I have seen our people put them into their baked and sodden puddings; there be whose tast allowes them to be as pretious as the English apricock; I confesse it is a good kind of horse plomb." (The Historie of travaile, etc., p. 118.)

bud or Judas tree, *Cercis canadensis*, are abundant. There are also the sumac (*Rhus*), the black haw, *Viburnum prunifolium*, the sassafras, *Sassafras officinale*, the chinquapin, *Castanea pumila*, the red cedar, *Juniperus virginiana* and the fringe tree, *Chionanthus virginica*, with its graceful tassels. In the warmer parts may be seen the magnolia, *Magnolia glauca*, the wahoo, *Ulmus alata*, and the beautiful shining leaves and red berries of the holly, *Ilex opaca*, while in a limited region in the south-east corner of the State, in the vicinity of Norfolk, are found the live oak, *Quercus virens*, the upland willow oak, *Quercus cinerea*, the yaupon, *Ilex cassine*, the dahoon holly, *Ilex dahoon*, the loblolly bay, *Gordonia lasianthus*, the southern prickly ash, *Xanthoxylum clava-herculis*, the iron-wood, *Bumelia lycioides*, the sweet-leaf, *Symplocos tinctoria*, the large tupelo, *Nyssa uniflora*, the osmanthus, *Osmanthus americanus*, and the Carolina water-ash, *Fraxinus platycarpa*. In the Dismal Swamp* the most abundant trees are the Gum, *Nyssa multiflora*, the white cedar, *Cupressus thyoides*, the Old-field pine, *Pinus tæda*, and the cypress, *Taxodium distichum*.

Of herbaceous species in Eastern Virginia occurring for example both in Albemarle, a representative county of the Piedmont region, and in the District of Columbia may be mentioned, *Clematis virginiana*, *Anemonella thalictroides*, *Hepatica triloba*, *Aquilegia canadensis*, various species of *Ranunculus*, *Viola* and *Hypericum*, *Claytonia virginica*, *Geranium maculatum*, *Oxalis violacea*, and *O. corniculata* var. *stricta*, *Impatiens fulva*, species of *Desmodium* and *Cassia*, *Tephrosia virginiana*, *Gillenia trifoliata*, *Potentilla canadensis*, *Rubus villosus*, *Cuphœa viscosissima*, *Œnothera biennis*, and one or other of the varieties of *Œnothera fruticosa* which in great profusion adorns the meadows in June as the Claytonia does earlier in the spring in certain situations. In the Compositæ are *Vernonia noveboracensis*, *Eupatorium purpureum* and *E perfoliatum*, *Hieracium venosum*, *Coreopsis verticillata*, various species of *Aster*, *Solidago* and *Helianthus*, *Chrysopsis Mariana*, *Chrysogonum virginianum*, *Ambrosia trifida* and *A artemisiæfolia*, *Actinomeris squarrosa*, *Rudbeckia laciniata*, *Helenium autumnale*, *Bidens cernua* and *B. bipinnata*, *Gnapha-*

*Field and Forest, Vol. III., p. 29.

lium polycephalum and *Antennaria plantaginifolia*. Of the remaining Gamopetalæ may be noticed *Cephalanthus occidentalis*, the very abundant little *Houstonia cœrulea*, *Specularia perfoliata*, three or more Lobelias and the two species of *Chimaphila*, species of *Vaccinium* and *Gaylussacia*, the well known and beautiful shrubs *Kalmia latifolia* and *Azalea nudiflora*, *Lysimachia quadrifolia*, *Verbascum thapsus*, *Pycnanthemum linifolium*, *Chelone Glabra*, *Mimulus ringens* and *M. alatus*, *Brunella vulgaris*, *Hedeoma pulegioides*, *Solanum carolinense*, species of *Gerardia*, *Mentha*, *Asclepias*, *Datura* and *Cuscuta*, *Gentiana andrewsii*, *Sabbatia angularis*, *Phytolacca decandra* and numerous Polygonums.

Of Monocotyledons, *Arisæma triphyllum*, *Symplocarpus fœtidus*, *Orontium aquaticum*, *Typha latifolia* one or more species of *Sagittaria* and *Spiranthes*, *Cypripedium acaule*, *Hypoxis erecta*, *Iris verna*, *Sisyrinchium anceps*, species of *Smilax*, *Erythronium Americanum*, *Polygonatum biflorum*, and great numbers of sedges and grasses. Of Ferns, *Polypodium vulgare*, *Pteris aquilina*, *Adiantum pedatum*, *Aspidium acrostichoides*, *Onoclea sensibilis* and the Osmundas are among those most constantly met with.

In the warmer southeastern part of Virginia we find also such plants as *Jatropha stimulosa*, *Yucca filamentosa*, *Callicarpa Americana Allium striatum*, *Hordeum pratense*, *Amaryllis atamasco*, *Arundinaria tecta*, *Gelsemium sempervirens*, *Bignonia capreolata*, *Berchemia volubilis*, and *Lencothoe axillaris*.* It is in this part of the State that cotton to some extent is cultivated.

The characteristics of the Flora of the mountain region are thus described by Mr. Howard Shriver :† "Owing to the altitude of Southwest Virginia averaging half a mile above sea level, the climate resembles that of the Middle States, many of our plants belonging to Pennsylvania and New York. Whereas, in the same latitude, east of us, near the seashore, the fig ripens its two crops, and plants common to North Carolina are found. Hence it is less necessary to enumerate the prevailing plants, and we shall confine our list to a few that may be regarded characteristic of the Flora.

* Field and Forest, Vol. III, pp. 1 and 151.

† Resources of South-West Virginia, by C. R. Boyd, E. M., N. Y., 1881, p. 84.

Among the first and most attractive, is the splendid *Rhododendron catawbiense*, which abounds on the hillsides and often extends to their summits, being sometimes intermixed with *R. maximum* and *Kalmia latifolia*—common farther north. Along the streams are *Clethra acuminata* and *alnifolia*, *Andromeda floribunda* and *Magnolia fraseri*, *umbrella* and *acuminata*. The mountain roads are lined in the early spring with the fragrant white flowers of *Leucothoe recurva*. Among a large number of Vaccinia are found *V. erythrocarpon* and *macrocarpon*. Of the Azaleas, there are *A. arborescens*, *viscosa*, *nudiflora*, and the most splendid *calendulacea* in every conceivable variety of coloring. *Galax aphylla* beautifies the woods in winter, with *Chimaphila* and several Pyrolas. In summer the *Monotropa*, and sweet scented *Schweinitzia odorata*. *Ilea* is well represented, including *I. monticola*. *Halesia tetraptera* is found in the water courses. The *Labiatæ* are well represented including the somewhat rare *Cedronella cordata*, *Scutellaria versicolor*, *pelosa*, *nervosa*, etc. *Stachys cordata*, *Asarum canadense*, *virginicum*, and *arifolium* are common with *Aristolochia sipho* and *serpentaria*. *Pyrularia oleifera*, *Euphorbiæ* of various species including *commutata*, *Uvularia grandiflora* and *sessilifolia* are common, as also *Prosartes lanuginosa*, and *Clintonia borealis* and *umbellata*. *Convallaria majalis* prevails on the mountains even to their summits. Of the Carices some twenty-five or thirty are common while *Carex fraseriana* is rare. The ferns are quite numerous, and at times grow in great luxuriance. The whole ground is often covered with a dense growth of *Cystopteris bulbifera*, the fronds from a foot to a foot and a half in height. In the same abundance are found *Aspidium goldianum* and *clintonianum*, while the open woods are carpeted with *Adiantum pedatum*, *Phegopteris*, and *Aspidium marginale* and *acrostichoides* with occasionally *Adiantum capillus veneris*. The rock crevices exhibit *Asplenium montanum*, *A ruta muraria*, *Cheilanthes vestita*, *Pellæa atropurpurea* and *Polypodium vulgare* and *incanum*, *Asplenium trichomanes*, *Camptosorus rhizophyllus*. In all some thirty species."* In the mountain region are also

*Further details will be found in early volumes of the Botanical Gazette.

noticeable several Trilliums, and the Ginseng *Aralia quinquefolia*, the collecting of which in this section of the Virginias forms an important business with many of the inhabitants, and on the summit of White Top Mountain I have observed *Oxalis acetosella* a very characteristic plant of the northern New York and New England woods.

The rhodendrons which are very abundant often cover areas of great extent which are thereby rendered almost impassable without the use of the axe.

But little has been written in detail upon the Flora of West Virginia but in the mountain region it resembles the Flora of the corresponding section of its sister State, and in the less elevated portions does not differ very markedly from that of some of the parts of Eastern Virginia. A list of 77 trees and plants taken from the Transactions of the West Virginia Medical Society, besides other botanical information has been given by Prof. Fontaine.*

Among the mammals of the Virginias are the Raccoon, *Procyon lotor* (the Aroughcun of Capt. John Smith), the Opossum, *Didelphis virginiana*, the Red Fox, *Vulpes vulpes* var. *fulvus*, the Gray Fox, *Urocyon cinereo-argentatus*, the Gray Squirrel, *Sciurus carolinensis*, the Fox Squirrel, *Sciurus niger* var. *cinereus*, the Flying Squirrel, *Sciuropterus volans*, the Ground Squirrel, *Tamias striatus*, the Woodchuck, *Arctomys monax*, the Common Hare, *Lepus sylvaticus*, the Common Mole, *Scalops aquaticus*, the Muskrat, *Fiber zibethicus*, the Skunk, *Mephitis americana* and the Mink, *Putorius vison*. Deer in many districts are abundant and Bears are not uncommon. Wild-cats are still to be found and a few Wolves and panthers. On White Top Mountain I have found the Red Squirrel, *Sciurus hudsonius*, common. In some counties the Otter, *Lutra canadensis*, and a very few Beaver, *Castor fiber*, are said yet to remain. Up to about the middle of the eighteenth century the Elk and Buffalo were very abundant, one of their favourite resorts being the Big Lick near the situation now occupied by the town of Roanoke, at the junction of the Norfolk

*Resources of West Virginia by M. F. Maury and Wm. M. Fontaine, A. M. Wheeling, 1876.

and Western and Shenandoah Valley Railways. The last buffalo in the Kanawha Valley was killed on a branch of Elk River in 1815 and the last elk in 1820, about five and a half miles from Charleston.* Martin in his Gazetteer of Virginia (1835) mentions the Elk as still abounding in Elk Mountain in Pocahontas County, and Howe (Historical Collections of Va., 1845) speaks of Elk and Beaver having been seen in small numbers within twelve years in Randolph County.

The rattlesnake is common in the mountain districts which are however singularly exempt from the black flies and mosquitoes, that occasion so much annoyance farther north.

Trout, *Salvelinus fontinalis* abound in the clear mountain streams and Black Bass are found in the rivers of the interior. Cat-fish of remarkable size are found in the New River. On the coast of Virginia among the best known food fishes are the Drum, *Pogonias cromis*, the Striped Bass or Rock Fish, *Roccus lineatus*, the Sea-Bass or Black Will, *Serranus furvus*, the Weak Fish. (usually called Trout) *Cynoscion regalis* and *C. maculatus*, the Sheepshead, *Archosargus probatocephalus*, the Blue Fish, *Pomatomus saltatrix*, the Spanish Mackerel, *Scomberomorus maculatus*, the Hog Fish, *Pomodasys fulvo-maculatus* and the Spot, *Leiostomus xanthurus*.

In considering the ornithological position of the Virginias, it is to be remembered that according to the classification and nomenclature of Prof. J. A. Allen,† which has been generally followed, the eastern province of North America may be considered as embracing seven ornithological faunæ or smallest of the natural divisions in zoölogical geography. These are (1) the American Arctic, (2) the Hudsonian, (3) the Canadian, (4) the Alleghanian, (5) the Carolinian, (6) the Louisianian, (7) the Floridian.‡ By far the larger portion of the Virginias

*Trans-Allegheny Pioneers. By John P. Hale—Cincinnati 1886, p. 62.

†On the Mammals and Winter Birds of East Florida with an examination of certain assumed Specific Characters in Birds, and a sketch of the Bird Faunæ of Eastern North America, by J. A. Allen. Part V. On the Geographical Distribution of the Birds of Eastern North America, with special reference to the Number and Circumscription of the Ornithological Faunæ. Bulletin Harvard Museum of Comparative Zoölogy. Vol. II. No. 3.

‡Further observations have shown that the faunal areas as thus defined require to be somewhat modified. The Louisianian and much of the Floridian

are included within the limits of three of these faunæ, the Canadian, Alleghanian and Carolinian and a small part appears to be comprised within the Louisianian.

"In attempting to determine the number and limits of the ornithological faunæ of a large area" writes Prof. Allen "it is evident that the distribution of the birds in the breeding season should be taken as the basis for the investigation rather than their entire range, since during no other portion of the year can the migratory species be regarded as being at their true homes." The climate of a region is the most important factor in influencing this distribution, but the faunal boundaries are not so often the yearly isotherms as the isotheral* lines since the mean temperature of the breeding season must necessarily more affect birds especially the migratory species than that of any other part of the year. Applying these principles the Louisianian or Austroriparian fauna was provisionally considered by Prof. Allen as limited to the northward by the isotheral line of 77 F. A considerable district in the south-eastern portion of Virginia, principally comprised in the Southside Peninsula, lying between the James and Nansemond Rivers and the North Carolina line, has a mean summer temperature above this, but with regard to the avifauna, we must class with it also the Norfolk Peninsula and a part of the Eastern Shore, or in general the country south of the yearly isothermal of 60° which runs in a south-westerly direction, through Eastville, Northampton County, and Hicksford, Greensville County.

This region of the State however cannot be regarded as quite typically Louisianian in its fauna, but rather Carolinian with a very decided infusion of Louisianian species, such as *Quiscalus major*, *Dendroica dominica*, *Sitta pusilla*, *Antrostomus carolinensis* and probably several others.

The Carolinian fauna extends from the limits of the Louisianian to about the isotheral line of 71 which, near the latitude of the North Carolina line, passes through Virginia at the approxi-

fauna of Prof. Allen are included in an area called by Prof. Cope, the Austroriparian, while the true Floridian fauna is an offshoot along the coast from the tropical fauna of the West Indies. For information in regard to this subject, I am indebted to Dr. C. H. Merriam.

*Lines which connect places of equal mean summer temperature.

mate elevation of 2,500 feet,* and at the northern limit of Virginia about three degrees to the northward (allowing as a rough estimate a diminution of 1°.5 to the degree of latitude and of one degree of temperature for every three hundred feet of elevation, which agrees pretty accurately with recorded temperature observations) corresponds to the elevation of 1,150 feet, or at the latitude of the extremity of the "pan handle" of West Virginia a degree farther north would answer to a height of 700 feet. The Virginian species ordinarily limited in their northward range by this fauna are *Cardinalis cardinalis*, *Spiza americana*, *Guiraca cærulea*, *Helmitherus vermivorus*, *Icteria virens*, *Protonotaria citrea*, *Sylvania mitrata*, *Dendroica cærulea*, *Piranga rubra*, *Mimus polyglottus*, *Thryothorus ludovicianus*, *Polioptila cærulea*, *Lophophanes bicolor*, *Corvus ossifragus*, *Centurus carolinus*, *Stelgidopteryx serripennis*, *Strix flammea*, *Cathartes aura*, *Ægialitis wilsonius*, *Gallinula galeata*, *Ionornis martinica*, *Ardea candidissima* and *Ardea cærulea*. Within its limits are comprised the whole of Virginia east of the Blue Ridge (including the lower parts of that mountain range), except the portion belonging to the Louisianian fauna and probably the highest parts of some of the mountains of the Piedmont region; most of the Valley (except the highest portions, especially the Massanutton mountain and the elevated south-western section situated about the head waters of the Roanoke and Holston and upper part of the New Rivers); the less elevated valleys of the mountain districts, and West Virginia between the mountains and the Ohio river. West of the Blue Ridge and east of the Alleghanies however the fauna is not so typically Carolinian as in Eastern Virginia and in the Ohio valley. Between the isotheral of 65° (which may be estimated as being found in the Virginias according to latitude at the elevation of from about 2,900 to 4,300 feet,) and the line of 71° the fauna is Alleghanian as shown by the presence in the breeding season of *Helminthophila chrysoptera*, *Empidonax minimus*, *Vireo solitarius alticola*, *Compsothlypis americana*, *Contopus borealis*, *Dendroica pennsylvanica* with doubtless several other species. The line of demarcation between this and the preceding fauna is not,

*Means summer temperature of Wytheville, Va. (elevation 2,242 ft.) 71° F.

however, very distinct, and some of its characteristic birds, for example *Empidonax minimus* and *Compsothlypis americana*, may also be found where the prevailing species are Carolinian. The parts of the Virginias included in it are portions of the Blue Ridge with its plateau counties of Floyd, Carroll and Grayson and a large part of the mountain divisions of Appalachia and Trans-Appalachia with the most elevated districts of the Valley. Above this elevation, the fauna is Canadian characterized by the occurrence of *Dendroica cærulescens*, *Dendroica blackburniæ*, *Dendroica virens*, *Sylvania canadensis*, *Troglodytes hyemalis*, *Junco hiemalis* and *Regulus satrapa*.

This fauna, with but little doubt, comprises the loftiest summits of the Blue Ridge and its offshoots; the high plateau covered with spruce and white pine of the sources of the Cheat and Potomac rivers in Randolph and Grant Counties, West Virginia, extending southward on the mountains into Pocahontas and Greenbrier, with much of the neighboring counties of Highland and Pendleton; part of the Great North Mountain belt west of the Valley between Montgomery and Shenandoah Counties, Va., and the tops of the higher mountains of Giles, Bland, Tazewell, Russell, Smith, Grayson and other counties. Such mountains, for example, are Humpback Mountain and the Peaks of Otter in the Blue Ridge, the Buffalo in Floyd County, the Balsam and White Top before mentioned as the highest in Virginia, Elliot's Knob in Augusta County, the Salt Pond Mountain in Giles, Bear Town Mountain of the Clinch Range in Tazewell County, Paddy Knob at the southwest corner of Highland, and in West Virginia, Panther Knob in Pendleton County, Keeney's Knob between Summers and Greenbrier, Haystack Knob between Randolph and Pocahontas and the Cherry Pond and Guyandotte Mountains between Raleigh and Wyoming.

It is to be understood, that these faunal areas which have been described are not to be defined with so great a degree of exactness, within limits of either altitude or temperature, as has been here recorded, especially where they come together on the mountains, and moreover in the absence of more extensive observations, are, to a considerable degree, provisional. As Mr. William Brew-

ster says of the North Carolina mountains "The boundaries between the different faunal areas are sharply marked in places, in others only faintly so, one set of birds often overlapping and mingling with another throughout a belt of neutral ground.

The line of separation between the Canadian and Alleghanian divisions so far as I have observed is better defined than that between the Alleghanian and Carolinian. The Canadian fauna is also purer than either of the other two.* * * * It is evident that altitude plays only a secondary part, various local conditions—such as the presence or absence of certain trees or shrubs—having clearly more influence. *Dendroica virens*, for example, was seen only where spruces and balsams predominated over other trees and *D. cærulescens* invariably in or near extensive tracts of rhododendrons.

For the rest it will not do to draw the lines too closely in a region where a bird can easily fly in a few minutes from a valley filled with southern trees and shrubs to a mountain summit clothed with northern Coniferæ. Indeed it is chiefly surprising that faunal lines can be drawn at all under such conditions." These observations of Mr. Brewster are very just and, as it seems to me, apply very well to the Virginia mountains.

The question as to the effect of altitude upon bird distribution is a complex one for the climate and vegetation necessarily vary with the elevation and it is perhaps the combined effect of the general conditions rather than any single factor taken by itself, which renders a locality attractive to birds. No one who has visited the respective regions can have failed to observe the resemblance between the climate, fauna and flora of the summits of the higher southern mountains and the localities of average elevation in northern New York and New England. The most sharply defined faunal line in the Virginias as in North Carolina, appears to be the lower limit of the Canadian fauna, its characteristic birds not being ordinarily found below a considerable altitude. That this rule however is subject to exceptions is shown by the discovery of Mr. L. M. Loomis that *D. virens* is common at a low elevation in the mountains of South Carolina.†

*An ornithological reconnoisance in Western North Carolina. By William Brewster. The Auk, Vol. III, No. 1. Jan. 1886. p. 100.

†The Auk, Vol. VII—1890. pp. 33 and 128. This species, however, is not altogether typically Canadian.

A further hindrance to the more exact definition of faunal lines is, as Professor Allen says, that rarely is any species limited to a narrower area than that of two or three faunæ and hence that these are determined by the peculiar association of species and not by the range of a single or of a few "restricted" species.

With regard to the influence of longitude, although the western boundaries of these faunæ extend to the limits of what has been called by Prof. Baird, the Eastern Province, which is bounded approximately by the meridian of 100°, the Appalachian Mountains forming but a feeble barrier ornithologically, there is still a slight change in the characters of the faunæ as soon as we proceed westward of this range, many species becoming abundant that are rare at the east and vice versâ and we may expect to find some of the birds of the Mississippi and Ohio valleys extending their migrations into the Trans-Appalachian region of the Virginias, especially along the rivers, like the Kanawha and Big Sandy. More investigations are needed upon this point, but the observations of Messrs. Scott and Brewster, who found *Quiscalus quiscula æneus*, *Geothlypis formosa* and *Dendroica cærulea*, becoming more common in the localities examined by them, than they are east of the mountains would seem to indicate that this is the case.

The times of arrival and departure of the migratory birds of course varies somewhat in different localities in the Virginias, but the height of the spring migratory season appears to be about that given by Drs. Coues and Prentiss for the District of Columbia, viz.: from April 20th to May 20th. This period is on the whole in accordance with my own observations carried on for some time in Albemarle County and also with some of the West Virginia records. Mr. Freke's dates of arrival for Amelia County seem to me in many instances late.

The limits of the autumn migration are not quite so sharply defined as is the case in spring, doubtless partially due to the fact that the young and old often migrate separately and it is spread over a more extended period, many species lingering longer than at the latter season, but the great mass of migrating birds are met with between September 1st and October 15th.

1. **Colymbus holbœllii.** Red-necked Grebe.—A not uncommon winter resident on the sea coast and larger rivers of eastern Virginia, such as the Potomac, more frequent in the migrations. A specimen has been shot on Buckhannon River, West Virginia, by Dr. J. R. Mathers, and a few are said to be occasionally found on the Ohio and Great Kanawha Rivers. This and the following species are usually known as Water Witches, from their skill in diving.

2. **Colymbus auritus.** Horned Grebe.—A winter resident more common in the migrations, resembling the preceding species in its habits. Abundant near Cobb's Island. Reported by Drs. Coues and Prentiss as common on the Potomac. Said to be more frequently met with along the larger streams of West Virginia than the preceding species. Audubon found it very common during autumn on the Ohio.

3. **Podilymbus podiceps.** Pied-bill Grebe; Didapper.—This species is the commonest of the Grebes and is found in winter and during the migrations, not only on large bodies of water like the Potomac but also on the mill ponds and small rivers of the interior of the Virginias. Some may breed in certain localities, but such fact has not yet been reported.

4. **Urinator imber.** Great Northern Diver; Loon.—Rather common in winter on the sea coast; occasionally seen in winter on the Potomac near Washington, according to Drs. Coues and Prentiss. Dr. Wheaton (Report on the Birds of Ohio, p. 563) found it common on the Ohio, and it is sometimes met with on various tributaries of that river in West Virginia.

5. **Urinator lumme.** Red-throated Diver; Loon.—Not common winter resident of the Coast region; resembles the preceding species in its habits. It is found occasionally near Cobb's Island. A young male of this species was sent me in February, 1885, by Mr. J. M. F. Williams of Cobham, Albemarle County, where it had been shot on a small creek. A specimen was caught in a gill-net on the Potomac a few miles below Washington in

the spring of 1882 (The Auk, Vol. V, p. 147), and I also learn from Dr. A. K. Fisher of another captured on the Potomac near Fort Washington, October 20th, 1889.

6. **Alca torda.** Razor-billed Auk.—Rare winter visitor on the sea coast. Captain Charles H. Crumb informs me that three have been taken near Cobb's Island, two in 1884, and one in 1887, one of which is now in my possession. A male was shot in the vicinity of Norfolk about October 15th, 1886, according to Mr. F. S. Webster, of Washington (The Auk, Vol. IV, p. 158).

7. **Rissa tridactyla.** Kittiwake Gull.—Captain Crumb reports this species as a rare and irregular winter visitor at Cobb's Island, but has never taken a specimen.

8. **Larus marinus.** Great Black-backed Gull.—Rare winter visitor. Has been taken (including the adult) at Cobb's Island, where, on the authority of Captain Crumb, it is not common although seen every winter. A specimen of the young bird from that locality, which is the most southern from which this species has been recently recorded, is in my possession. Audubon, however, says that he saw several pairs in company with the young Brown Pelican at St. Augustine and that the young extend their winter migrations to the middle portions of the east coast of Florida.

9. **Larus argentatus smithsonianus.** Herring Gull.—Common winter resident of the Coast region; occasionally seen near Washington, along the Potomac. Reported by Dr. Wheaton to be not uncommon on the Ohio River. Has been observed in spring by Dr. J. R. Mathers, of Buckhannon, West Virginia.

10. **Larus delawarensis.** Ring-billed Gull.—Common winter resident of the Coast region; most numerous at Cobb's Island in the autumn; more frequently seen near Washington than the preceding species, according to Drs. Coues and Prentiss.

11. **Larus atricilla.** Laughing Gull.—Common summer resident on the coast arriving early in April. One of the most abundant gulls at Cobb's Island where numbers commence to breed about the 20th of June. It is said to be a rare visitor during late summer and early autumn near Washington.

12. **Larus philadelphia.** Bonaparte's Gull.—Spring

and autumn migrant. Not uncommon at Cobb's Island. Not infrequently seen during the migrations near Washington, being comparatively common in August and September.

13. **Gelochelidon nilotica.**—Marsh Tern; Gull-billed Tern.—Summer resident on the coast. Common at Cobb's Island and breeds, formerly in great abundance, commencing to lay its eggs about the 26th of June. I have been informed that great numbers of the eggs have formerly been taken from the north end of Hog Island, adjoining Cobb's. It has been occasionally seen during the late summer and early fall months near Washington.

14. **Sterna tschegrava.** Caspian Tern.—Not common on the coast in summer. Messrs. Henshaw and Ridgway found it breeding at Cobb's Island in July, 1879 (Bull Nuttall Club, Vol. V, p. 221). Captain C. H. Crumb has also taken three sets of eggs in the month of July.

15. **Sterna maxima.** Royal Tern; Gannet; Gannet Striker.—Not uncommon on the coast in summer. In July, 1880, Mr. Ridgway found a colony of several thousands of this species breeding on Cobb's Island. Captain Crumb has found eggs in the latter part of June.

16. **Sterna forsteri.** Forster's Tern.—Not uncommon summer resident of the Coast region. Found breeding in the vicinity of Cobb's Island, by Mr. William Brewster, in July, 1880, in moderate numbers (Bull Nuttal Club, Vol. VII, p. 126). Captain Crumb reports that it now breeds very sparingly there commencing to lay its eggs about June 20th. Mr. P. L. Jouy has found this species quite abundant on the lower Potomac and it has been taken also in the neighborhood of Washington (Field and Forest, Vol. II, p. 29).

17. **Sterna hirundo.** Common Tern; Wilson's Tern.—Common summer resident on the sea coast; breeds at Cobb's Island, beginning to lay its eggs about the middle of May. Occasionally found near Washington during late summer and early fall. I found it common at Virginia Beach, Princess Anne County, early in June. The A. O. U. list mentions that it winters north to Virginia but it does not appear to be found at Cobb's Island at that season.

18. **Sterna dougalli.** Roseate Tern.—Not common summer visitor in the Coast region. Very frequently seen skimming over the waters of Hampton Roads in May, 1877, by Mr. C. L. Phillips (O. & O. XII, p. 122). Dr. Brewer stated (Water Birds of North America, Vol. 2, 1884, p. 305) that it still bred on islands near Cape Charles, but I can obtain no record of its breeding at Cobb's Island where it appears to be rather rare, although Captain Crumb informs me that he has taken it in the spring.

19. **Sterna antillarum.** Least Tern.—Common summer resident on the sea coast. It breeds at Cobb's Island, commencing to lay its eggs in the latter part of May, but I am informed that it is rapidly diminishing in numbers. It is frequently seen near Washington in August and September, and more seldom in the Spring. I found it a common species at Virginia Beach.

20. **Hydrochelidon nigra surinamensis.** Black Tern.—Not uncommon in early autumn at Cobb's Island. It has been seen there in the breeding season but is not known to breed. It is not uncommon in August and September and in spring near Washington, and has been observed near Staunton, Augusta County (Forest and Stream Vol. XII, p. 185). It is less frequently a marine bird than the other Terns and usually breeds in the interior of portions of the Western United States.

21. **Rynchops nigra.** Black Skimmer; Flood Gull.—Summer resident of the Coast region. Rather common along the Atlantic side of the Eastern Shore, where it breeds; arrives early in May, leaves in October. Eggs are found from about the 20th of June to the middle of August. Individuals were once seen on the Potomac below Washington, by Drs. Coues and Prentiss.

22. **Oceanodroma leucorhoa.** Leach's Petrel.—Dr. Brewer mentions that Giraud in his Birds of Long Island, quotes a letter from Professor Baird stating that after the violent gale of August, 1842, a large number of these birds were found inland, and that six or more were procured near Washington and others taken at Petersburg, Virginia, besides at other points hundreds of miles from the open sea. Their occurrence in these localities was of course accidental. The A. O. U. check list gives as the winter habitat of this bird on the Atlantic coast "south to Vir-

ginia." Petrels have been observed by Mr. C. L. Phillips in May off the Virginia coast (Ornithologist and Oölogist, XII, p. 122), recorded by him as *Procellaria pelagica*, but they probably should have been referred to the present species or to *Oceanites oceanicus*, Wilson's Petrel.

23. **Sula bassana.** GANNET.—Winter visitor, rather common in the migrations off the eastern shore and near the mouth of Chesapeake Bay.

24. **Phalacrocorax dilophus.** DOUBLE-CRESTED CORMORANT.—Common winter visitor from September to May in the Coast region, where it is most common in the migrations. It was once observed in the District of Columbia many years ago, on the authority of Drs. Coues and Prentiss. At Cobb's Island these birds are known as Negro or Black Geese.

25. **Pelecanus erythrorhynchus.** WHITE PELICAN.—Very rare. Messrs. Smith and Palmer have recorded three instances of its capture; two were taken near Alexandria and the third opposite Washington, on the Virginia bank of the Potomac (The Auk, Vol. V, p. 147). Captain C. H. Crumb informs me that a White Pelican was seen a number of years ago by Mr. Nathan Cobb, on Bone Island, Northampton County. A specimen has also been met with at Oakland, Md. (Forest and Stream, XXVIII, p. 345).

26. **Pelecanus fuscus.** AMERICAN BROWN PELICAN.—I give this species on the authority of Captain Crumb, who says that this bird was seen in the neighborhood of Cobb's Island in the fall of 1881.

27. **Merganser americanus.** AMERICAN MERGANSER; GOOSANDER; SHELLDRAKE.—A rare winter resident on the Potomac near Washington. I have not obtained other satisfactory records of its occurrence in the Tidewater and Coast region where it is undoubtedly to be met with. It has been said to be tolerably common on the rivers of West Virginia.

28. **Merganser serrator.** RED-BREASTED MERGANSER; SHELLDRAKE.—Winter resident of the Tidewater and Coast region. Common on the Eastern Shore, not common in the neighborhood of Washington, on the Potomac. It has been said to occur in West Virginia.

29. **Lophodytes cucullatus.** Hooded Merganser; Hairy Head.—Winter resident of the Tidewater and Coast region; not common on the Eastern Shore, rare on the Potomac near Washington. Audubon speaks of its breeding on the Ohio and Mr. Scott has reported the capture of an immature female near Coalburgh, West Virginia, August 9th, 1872. It has been reported to have been occasionally observed on the Ohio in spring and autumn by Mr. Brown of Parkersburg, who has obtained a specimen.

30. **Anas boschas.** Mallard.—A common winter resident on the brackish and fresh waters of the Virginias. It is also found at Cobb's Island where it is not common. It possibly breeds on some of the rivers of the mountain region.

31. **Anas obscura.** Dusky Duck; Black Duck.—An abundant winter resident of the Tidewater and Coast region. It is found not only on brackish and fresh waters but frequents the creeks and bays near salt water marshes. It is a numerous species at Cobb's Island where it is much sought after by sportsmen and although shy is readily decoyed. It is said to occur on the Ohio River as well as on several of the smaller streams of West Virginia.

32. **Anas strepera.** Gadwall; Gray Duck.—A common winter resident on the Potomac according to Drs. Coues and Prentiss, and probably on the other rivers of the Tidewater region. It is not known to occur at Cobb's Island. It has been said to be found on the larger streams of West Virginia.

33. **Anas penelope.** European Widgeon.—Accidental visitor. There is a specimen of this bird from Alexandria, Va., obtained in 1863, in the United States National Museum (Avifauna Columbiana, p. 103). Dr. Mearns also reports one from the James River, Va., and another sent from Baltimore probably taken on Chesapeake Bay (The Auk, Vol. VIII, pp. 88 and 204). Mr. Ruthven Deane mentions on the authority of Mr. George O. Welch that it is occasionally found at Currituck Sound, N. C., and that it is well known to the gunners along the coast of Virginia (Bull Nuttall Club, V, p. 126). I am unable to give any record of its occurrence at Cobb's Island.

34. **Anas americana.** American Widgeon; Bald-pate;

BALD-FACE.—Common winter resident of the Tidewater and Coast region; not abundant at Cobb's Island.

35. **Anas crecca.** EUROPEAN TEAL.—Accidental visitor. A specimen shot on the Potomac River, near Washington, in 1885. is now in the collection of the United States National Museum.

36. **Anas carolinensis.** GREEN-WINGED TEAL.—Abundant winter resident of the Tidewater region, arriving on the Potomac about the middle of September. On the authority of Dr. Mathers it is sometimes very common on Buckhannon River, West Virginia.

37. **Anas discors.** BLUE-WINGED TEAL.—Abundant winter resident of the Tidewater region; arrives on the Potomac at about the same time as the preceding species, It has been observed by Dr. Mathers near Buckhannon.

38. **Spatula clypeata.** SHOVELLER; SPOONBILL.—Not uncommon winter resident of the Tidewater and Coast region; moderately common at Cobb's Island; has been said to occur on some of the West Virginia rivers.

39. **Dafila acuta.** PIN-TAIL; SPRIG-TAIL.—Common winter resident of the Tidewater and Coast region, arriving on the Potomac about October 1st. Mr. Trumbull mentions that it is sometimes called the Gray Duck at Washington and Alexandria (Names and Portraits of Birds, pp. 37–38). Rather common at Cobb's Island. Has been reported to be tolerably common in parts of West Virginia.

40. **Aix sponsa.** WOOD DUCK; SUMMER DUCK.—Rather common on the rivers and fresh waters of the Virginias. In the Tidewater region it is most common in winter but has been known to breed at Mt. Vernon, Va. It is found in summer and breeds along the rivers of the mountain region. Mr. Scott has reported it as breeding near Coalburgh on the Kanawha.

41. **Aythya americana.** RED-HEAD.—Common winter resident in Chesapeake Bay and on its tributary rivers; uncommon on the Atlantic side of the Eastern Shore. Said to be found on the Ohio and occasionally in the interior of West Virginia.

42. **Aythya vallisneria.** CANVAS-BACK.—Common winter resident in Chesapeake Bay and on the large rivers of the Tidewater region. According to Mr. Trumbull it is also called White-

back on the Potomac and Shelldrake on the James (Names and Portraits of Birds, p. 47). Occasional at Cobb's Island. Said to be tolerably common in West Virginia.

43. **Aythya marila nearctica.** Scaup Duck; Black-head; Broad-bill; Blue-bill.—Common winter resident of the larger rivers and bays of the Tidewater and Coast region. Known also at Washington and Alexandria as Bay-shuffler (Trumbull, Names and Portraits of Birds, p. 55). Said to be found occasionally on the Ohio and Great Kanawha rivers. This species has been reported by Mr. Hugh M. Smith as having bred in one accidental instance at Mt. Vernon Springs, Va. (The Auk, Vol. V, p. 18).

44. **Aythya affinis.** Lesser Scaup Duck; Lesser Black-head; Flock Duck; Raft Duck.—Not uncommon winter resident in the Tidewater and Coast region. According to Drs. Coues and Prentiss it is not very abundant on the Potomac near Washington. Captain C. H. Crumb informs me that it is seen in large flocks in the fall near Cobb's Island. A specimen has been taken near Buckhannon, West Virginia, and it is said to be more common in that State than the preceding species. Additional names given to this duck are River Shuffler at Alexandria and Washington, and Creek Black-head on Chesapeake Bay (Trumbull, Names and Portraits of Birds, p. 58).

45. **Aythya collaris.** Ring-necked Duck.—Drs. Coues and Prentiss report this species as a rare winter resident on the Potomac near Washington, arriving about the last week in September. I have no other record of its occurrence in the Tidewater region, though it is probably not very rare. Captain Crumb writes me from Cobb's Island, "I have never met with it, but think it occurs here under the name of Mud Duck, but am not positive."

46. **Glaucionetta clangula americana.** American Golden-eye; Whistler; Whistler-wing; Cub-head—Abundant winter resident on the salt water bays and larger rivers of Eastern Virginia. It has been reported that it generally appears on the Ohio by the last week in September.

47. **Charitonetta albeola.**—Buffle-head; Dipper; Butter-ball.—Abundant winter resident of the Tidewater and

Coast region; also frequent on the inland waters of the Virginias.

48. **Clangula hyemalis.** Long-tailed Duck; South-southerly.—Abundant winter resident on the salt water. A specimen has been shot on the Potomac near Washington. (The Labrador Duck, (*Camptolaimus labradorius*) now perhaps extinct, was formerly found, according to Audubon, as far south as Chesapeake Bay.)

49. **Somateria spectabilis.** King Eider.—A young bird of this species was obtained at Cobb's Island by Captain C. H. Crumb, December 19th, 1889. The identification has been confirmed by Professor J. A. Allen. The King Eider has not previously been reported from any point south of New Jersey.

50. **Oidemia americana.** American Scoter; Butter-bill Coot—Winter resident on the salt water; is found on Chesapeake Bay.

51. **Oidemia deglandi.** Velvet Duck; White-winged Coot.—Rather common winter resident on the salt water; not abundant at Cobb's Island; has been met with near Washington.

52. **Oidemia perspicillata.** Surf Duck; Patch-poll Coot.—Common winter resident on the salt water. I have seen a flock of "Coots" (probably of this species) at Virginia Beach as late in the season as June, which for some reason had failed to migrate.

53. **Erismatúra rubida.** Ruddy Duck.—Common winter resident of the Coast and Tidewater region. It is known at Cobb's Island as the Quill-tail. Mr. Trumbull gives a long list of the various names applied to this bird (Names and Portraits of Birds, pp. 110-112).

54. **Chen hyperborea nivalis.** Snow Goose.—Not common winter visitor. A specimen was observed in Virginia in the winter of 1877, by Lieutenant Wirt Robinson (The Auk, Vol. VI, 1889, p. 195). I have seen three specimens taken near Cobb's Island in 1889.

55. **Branta canadensis.** Wild Goose.—Common winter resident more numerous in the migrations, on the coast and on the larger bays and rivers of Eastern Virginia. During the migrations flocks are also often seen or heard passing over in other parts of the Virginias occasionally stopping in favorable localities.

56. **Branta canadensis hutchinsii.** HUTCHIN'S GOOSE.—A goose, from its small dimensions and sixteen tail feathers apparently referable to this sub-species, was taken at Cobb's Island in the winter of 1888-89.

57. **Branta bernicla.** BRANT.—Common on the coast in winter. More strictly limited to the salt water than the Wild Goose. It is abundant at Cobb's Island where I have seen it in immense flocks. The number of young birds seen in proportion to the old varies greatly in different winters.

58. **Branta nigricans.** BLACK BRANT.—A straggler from the west. Captain Crumb informs me that it is usual for one or two to be obtained at Cobb's Island nearly every winter. I have examined a specimen that was shot there but have not learned of any very recent occurrence of the species in that locality.

59. **Olor columbianus.** WILD SWAN; WHISTLING SWAN.—Not uncommon in winter on the Chesapeake and the larger bays and rivers of the Tidewater region; more numerous in the migrations. Occasionally seen in West Virginia in spring and autumn. Great numbers are said to have been killed on the south branch of the Potomac near Romney, Hampshire County, in the autumn of 1887.

60. **Tantalus loculator.** WOOD IBIS.—Two specimens of this bird are reported by Dr. A. Wall to have been taken near Bloomery, Hampshire County, West Virginia (The American Field, Vol. XXII, p. 82). [In the Water Birds of North America, Vol. I, pp. 95 and 96, the late Dr. Brewer has said of the Glossy Ibis (*Plegadis falcinellus*). "At very irregular periods in the spring, small flocks have been seen on the coast of the Middle States and on the eastern shore of Maryland and Virginia," and refers to the capture of a specimen near Baltimore and two others in the District of Columbia, in 1817.]

61. **Botaurus lentiginosus.** BITTERN.—Not common summer resident in Eastern Virginia, some remaining during the winter, as Drs. Coues and Prentiss who have found it rather common about Washington record it as a resident. Mr. Freke (Birds of Amelia County) says that it is not common in Amelia County where he has only seen it in spring. It has been taken at Cobb's Island by Captain C. H. Crumb who does not think

that it breeds there. It is also said to be a summer resident in West Virginia in suitable localities.

62. **Botaurus exilis.** Least Bittern.—Not common summer resident of the Virginias. It is said to be rather uncommon near Washington; Mr. Scott reports the capture of a specimen by Mr. Woodruff at Charleston, West Virginia, and Mr. Doan mentions having seen another on the same river. It has been taken by Dr. Mathers in summer on Buckhannon River and I have met with one in September on the Pamunkey. Captain Crumb has taken it at Cobb's Island but has not found it breeding there.

63. **Ardea herodias.** Great Blue Heron.—Summer resident of the Virginias. Common near the coast, less numerous along the rivers of the interior. Occasionally seen in winter at Cobb's Island. Breeds on Mockhorn Island near Cobb's.

64. **Ardea egretta.** American Egret; White Crane.—Not common summer visitor in eastern Virginia. Occasionally seen on the Potomac near Washington during late summer and early fall. Mr. William Palmer has known this bird to nest in Arlington Cemetery (The Auk, Vol. V. p. 19). A specimen was taken near Buckhannon, West Virginia, some years ago, and another is said to have been obtained by Mr. Brown, of Parkersburg, in the summer of 1886 on the Little Kanawha River.

65. **Ardea candidissima.** Snowy Heron.—Summer resident of the Coast and Tidewater region; breeds. Not uncommon near Washington towards end of summer and early in fall. A few were seen along the creeks in Warwick County in May, 1887, by Mr. Phillips (O. & O. XII, p. 122). Formerly common, now less numerous, at Cobb's Island, near which place Captain C. H. Crumb has counted twenty nests on a small piece of marsh no larger than ten acres.

66. **Ardea tricolor ruficollis.** Louisiana Heron.—Very rare summer visitor in the Coast region. I have in my possession a skin of an immature bird taken several years ago at Cobb's Island, and understand from Captain Crumb that he has heard of two others that have been seen or taken.

67. **Ardea cœrulea.** Little Blue Heron.—Not common summer resident. A specimen was taken by Mr. C. L. Phillips

in Warwick County, in May, 1887 (O. & O. XII, p. 122). Mr. P. L. Jouy says that although usually rare near Washington it is sometimes extremely abundant, and that a large flock of about one hundred and fifty birds frequented the shores of the Potomac in August, 1875 (Field and Forest, Vol. III, p. 51). During his visit to Petroleum, West Virginia, a fine adult bird of this species was seen by Mr. William Brewster on the banks of Goose Creek, and Mr. Doan gives two other records for West Virginia.

68. **Ardea virescens.** Green Heron; Fly-up-the-Creek.—Everywhere a common summer resident of the Virginias in suitable localities, from the marshes of the sea coast to the streams of the mountain region, arriving in spring in the latter part of April; breeds. The most abundant and well known species of Heron.

69. **Nycticorax nycticorax nævius.** Black-crowned Night Heron.—Not common summer resident in eastern Virginia. Occasionally seen during the latter part of summer about Washington and has also been known to breed in that neighborhood. Not found breeding at Cobb's Island where it is known as the Wops. Rare in Upshur County, West Virginia.

70. **Nycticorax violaceus.** Yellow-crowned Night Heron.—Rare summer visitor in the Coast region. I have examined a young bird that was taken at Cobb's Island and think that another specimen has also been obtained there. Wilson says, "This bird also extends its migrations into Virginia, and even farther north; one of them having been shot a few years ago on the borders of the Schuylkill below Philadelphia."

71. **Grus mexicana.** Sandhill Crane.—Accidental in West Virginia. On the authority of Mr. E. L. Day a specimen was killed near Buckhannon in the spring of 1884. A specimen was obtained in the District of Columbia many years ago. (A reference under the heading of *Grus americanus*, in Bailey's Index to Forest and Stream, Vol. VI, p. 355, to a bird taken at Lynchburg, Virginia, probably relates to *Ardea egretta*).

72. **Rallus elegans.** King Rail; King Sora.—Not uncommon summer resident in fresh marshes of the James and other rivers flowing into Chesapeake Bay. Mr. R. Robinson

of Nelson County, has taken it in every month from April until after heavy frosts. A nest was found June 15th, 1887, in a marsh opposite the Long Bridge at Washington, by Mr. Melville Thompson containing eleven eggs partly incubated. (The Auk, Vol. V, p. 20). Lieutenant Wirt Robinson mentions, as does Mr. Trumbull, that the name King Sora is also applied to the Florida Gallinule, a practice which is liable to cause much confusion with regard to the two birds.

73. **Rallus crepitans.** Clapper Rail; Mud Hen.—Common summer resident of the salt water marshes of eastern Virginia arriving as early as March. A few may perhaps be found in winter. A specimen was shot in the marsh above the Long Bridge at Washington by Mr. Frank Ford, September 8th, 1882. Breeds in abundance, the eggs being often taken for food. At Cobb's Island these birds are not infrequently driven from their hiding places by unusually high tides and on such occasions are easily captured. Mr. Trumbull gives the names of Meadow Hen and Marsh Hen as applied to this species at that place. It is very often known as Sage Hen (a corruption of Sedge Hen.) A partial albino has been taken at Cobb's Island.

74. **Rallus virginianus.** Virginia Rail.—Not uncommon migrant in eastern Virginia, where it is found in the localities frequented by the common Sora, in the proportion as estimated by Lieutenant Wirt Robinson of about one or two to every hundred of the latter bird. It has been taken in June and July by Mr. R. Robinson and has also been seen near Washington in the breeding season. It is said to be found in West Virginia and sometimes to breed along the Ohio River.

75. **Porzana carolina.** Common Rail; Sora.—Abundant migrant in the marshes bordering the Tidewater rivers of eastern Virginia, especially in the latter part of August, September and October; much less numerous in spring; also occurs as a straggler away from the larger rivers. It has been observed in June and July by Mr. R. Robinson, and Wilson refers to their being reported to breed in Virginia. It probably breeds near Washington. (The Auk, Vol. V, p. 20). On September 15th and 16th, 1881, I am informed, Messrs. J. R. Branch and John Snelling of Richmond killed in one of the marshes of the James 1,235 Sora,

18 Summer Duck, a Yellow-shank Snipe and two King Rail. These birds are sold in the markets of Richmond and Petersburg literally by wagon loads during the season. They are often killed at night by means of a light and paddle. An albino and a melanotic specimen have been taken and partial albinoes as well as mottled and pied ones, by Lieutenant Robinson and Mr. R. Robinson. The Sora is said to be found also in West Virginia.

76. **Porzana noveboracensis.** YELLOW RAIL.—Rare migrant. Mr. R. Robinson has examined many specimens all killed in late autumn in Sora marshes. Lieutenant Robinson has the skin of one killed on the James River. "In the collection of the National Museum are two Yellow Rails both of which were taken in the marshes of the Potomac River near Washington: the first by T. E. Clark, October 4, 1879, the second by A. Skinner, March 28th, 1884 (The Auk, Vol. V, p. 147).

77. **Porzana jamaicensis.** LITTLE BLACK RAIL.—Very rare migrant. Mr. R. Robinson has examined portions of the mutilated fresh skins of this Rail and is convinced from the descriptions of good observers that it is not very infrequently found; he believes that he has himself had glimpses of it on two occasions. This species has been met with near Washington (The Auk, Vol. I, p. 397).

[Mr. R. Robinson writes with reference to the European Land Rail (*Crex crex*) "Portions of a mutilated skin I examined I could refer to no other species, but it was so imperfect I am not entirely certain."]

78. **Ionornis martinica.** PURPLE GALLINULE.—Mr. R. Robinson has seen several fine specimens taken at irregular intervals during a considerable number of years. Lieutenant Robinson has also seen both species of Gallinules.

79. **Gallinula galeata.** FLORIDA GALLINULE.—Not uncommon in the Tidewater region especially in autumn. Mr. Robinson considers it about as numerous as *Rallus virginianus*. It occurs at Cobb's Island. Besides the name of King Sora often applied to it, Mr. Trumbull says that it is called at Washington, King Ortolan and Marsh Pullet. Mr. Doan says that a bird of this species was killed by a resident of Weston, Lewis County, West Virginia, July 30, 1888.

80. **Fulica americana.** American Coot; Crow Duck; Crow Bill.—Common winter resident in eastern Virginia, especially numerous in autumn, occurring in large flocks on the lower parts of the rivers flowing into Chesapeake Bay; less abundant on the rivers of the interior. It is found occasionally at Cobb's Island. Mr. E. L. Day reports it as a common summer visitor in Upshur County, West Virginia, where it not improbably breeds. It has been said to be very common on the Ohio in autumn. The name of Blue-peter often given to this species is used by Jefferson in his "Notes on Virginia."

81. **Phalaropus lobatus.** Northern Phalarope.—Very rare migrant. Two of these birds were seen at Cobb's Island in the autumn of 1889, and one of them, a female, was taken and brought to Captain C. H. Crumb. Mr. E. L. Day has taken a specimen on the Buckhannon River, West Virginia, and Mr. Doan says he obtained one on the Ohio River near Parkersburg, September 26, 1888. [A Red Phalarope, (*Crymophilus fulicarius*,) was shot on the eastern branch of the Potomac, October 17th, 1885, by Mr. F. S. Webster. (The Auk, Vol. III, pp. 140 and 482.) Forest and Stream, (Vol. 8, 1877, p. 269) contains the following possible reference to *Recurvirostra americana*. "A beautiful specimen of the large legged Avosets was shot a short time since on the flats a short distance below the city." (Norfolk.)]

82. **Scolopax rusticola.** European Woodcock.—Accidental visitor. Dr. Coues has reported its occurrence in Loudoun County, where one was shot in 1873 (Forest and Stream, Vol. VI, p. 180).

83. **Philohela minor.** American Woodcock.—Rather common in the Virginias in localities suited to its habits; resident in the warm, summer resident in the colder districts; breeds. It is usually called Night Partridge in the Tidewater and Coast region.

84. **Gallinago delicata.** Wilson's Snipe: English Snipe.—Common migrant in the Virginias; abundant in the Tidewater districts, less common in the interior although it penetrates even into the mountain region. Mr. Freke found it rare in Amelia County. I have met with it on several occasions in Albemarle County.

85. **Macrorhamphus griseus.** Red-breasted Snipe; Dowitcher; Grey-back.—Common migrant in the Coast region. A specimen was taken near Washington by Mr. W. F. Roberts in September, 1878, who mentions that it is quite common at Piney Point, Md. on the lower Potomac (Field and Forest, Vol. III, p. 172). [Seven Long-billed Dowitchers (*Macrorhamphus scolopaceus*) were killed from a flock on the Anacostia River, D. C., in April, 1884. (The Auk, Vol. V, p. 147) A Stilt Sandpiper (*Micropalama himantopus*) was taken on the Pawtuxent River, Maryland, September 8, 1885, by Mr. H. W. Henshaw. (The Auk, Vol. III, p. 140.)]

86. **Tringa canutus.** Red-breasted Sandpiper; Knot; Robin Snipe.—Common migrant on the coast; especially abundant in the month of May at Cobb's Island.

87. **Tringa maculata.** Pectoral Sandpiper; Grass Snipe.—Not uncommon in marshy meadows in the Tidewater region during the migrations. Mr. Trumbull says it is called Cow Snipe at Alexandria, Virginia.

88. **Tringa minutilla.** Least Sandpiper; Peep.—Common migrant in Coast region, less abundant on the large rivers. I once met with a specimen on a small creek in Albemarle County on the 21st of May. Said to be tolerably common in autumn on some of the principal streams of West Virginia especially the Ohio.

89. **Tringa alpina pacifica.** Red-backed Sandpiper.—Common in the Coast region in winter, as well as in the migrations. This bird used formerly to be found at Cobb's Island in enormous flocks, but has since greatly diminished in numbers. In winter it is called Sand Snipe or Winter Snipe, but in its spring plumage it is known as the Black-breast. Two specimens were taken many years ago near Washington (The Auk, Vol. III, p. 140).

90. **Ereunetes pusillus.** Semipalmated Sandpiper; Peep.—Abundant on the Coast in the migrations, both on the beaches and in the marshes. Occasionally met with near Washington.

91. **Ereunetes occidentalis.** Western Sandpiper.—This species was first reported from the Virginia coast by Mr.

C. W. Beckham, who met with several at Virginia Beach, September 6 and 7, 1884, in company with the preceding and several other species of the smaller waders (The Auk, Vol. II, p. 110). It was also found to be common at Piney Point, Maryland, on the Potomac, in August, 1885, by Mr. Hugh M. Smith (The Auk, Vol. II, p. 385).

92. **Calidris arenaria.** SANDERLING.—Common in the migrations on the coast, where it frequents the beaches. A few are also found during the winter at Cobb's Island. It has been taken near Washington.

93. **Limosa fedoa.** GREAT MARBLED GODWIT; MARLIN.—Formerly common, now rare, on the eastern shore in the migrations.

94. **Limosa hæmastica.** HUDSONIAN GODWIT; RING-TAILED MARLIN.—Very rare on the eastern shore in the migrations. I have seen a specimen taken at Cobb's Island by Captain Crumb. One was shot by Mr. J. M. Ellzey, May 16, at West River, Maryland, in a grass field adjoining the village of Halesville (Forest and Stream, Vol. XXVII, p. 264).

95. **Totanus melanoleucus.** GREATER YELLOW-LEGS.—Common in the Coast marshes during the migrations and also seen in the interior in suitable localities especially near the larger rivers. Frequently met with near Washington. Mr. Doan mentions having observed two of these birds near Point Pleasant on the Ohio River.

96. **Totanus flavipes.** YELLOW-LEGS.—Common in the migrations; frequents the same places as the preceding species. A single one was noted by Mr. Brewster near Petroleum, West Virginia, April 29th, 1874, in a wet meadow near the creek.

97. **Totanus solitarius.** SOLITARY SANDPIPER.—Rather common in the Virginias during the migrations. I have met with it at Cobb's Island and have frequently observed it in the interior in Albemarle County, usually by a muddy pool or mill-pond. It is never met with in flocks. Occasionally birds so young have been taken near Washington, late in summer, that possibly they may have been hatched in the vicinity. At Blacksburg, Montgomery County, Virginia, late in May, 1883, Dr. Coues observed a pair which seemed to have mated and settled for the summer.

98. **Symphemia semipalmata.** WILLET.—Common summer resident on the coast and breeds, though many go farther north. Less abundant than formerly at Cobb's Island where Willets are occasionally seen in winter. Rare near Washington in the migrations.

99. **Actitis macularia.** SPOTTED SANDPIPER.—Common summer resident of the Virginias, being found everywhere along the rivers and streams of the interior as well as on the coast; breeds.

100. **Bartramia longicauda.** BARTRAMIAN SANDPIPER; GRASS PLOVER; FIELD PLOVER.—Not common summer resident of eastern Virginia, irregularly distributed; breeds. Frequents old pasture fields. It is also found on the coast. I have seen a specimen taken at Cobb's Island. Occurs near Buckhannon, West Virginia.

101. **Numenius longirostris.** LONG-BILLED CURLEW; SICKLE-BILL.—Formerly abundant in the migrations, on the Coast; many also were found in winter. It is now almost exterminated at Cobb's Island. It has been reported by Drs. Coues and Prentiss as not uncommon in the migrations near Washington.

102. **Numenius hudsonicus.** HUDSONIAN CURLEW; JACK CURLEW.—Common on the coast in the migrations, especially in spring. Mr. Trumbull saw these birds in immense flocks on the coast of Northampton County in the spring of 1885 (Names and Portraits of Birds, etc., p. 200). I have found them not abundant at Cobb's Island in the month of September. According to Mr. Trumbull it is sometimes known as Striped-head.

103. **Numenius borealis.** ESKIMO CURLEW.—Captain C. H. Crumb calls this species a rare and an irregular migrant as Cobb's Island. It has been said to be common at Chincoteague (Forest and Stream, Vol. IX, p. 111. Probably *N. Hudsonicus* is intended).

104. **Charadrius squatarola.** BLACK-BELLIED PLOVER; BLACK-BREAST PLOVER.—Common on the Eastern Shore in the migrations.

105. **Charadrius dominicus.** AMERICAN GOLDEN PLOVER.—Not uncommon migrant. Has been taken at Cobb's Island

where it is rare. Rather common near Washington, where it frequents old fields as well as the river flats.

106. **Ægialitis vocifera.** KILLDEER.—Common resident or summer resident of the Virginias, according to locality; breeds.

107. **Ægialitis semipalmata.** SEMIPALMATED PLOVER; RING-NECK.—Common on the coast in the migrations. Remains later in autumn than the Piping and Wilson's Plovers. Has been met with near Washington.

108. **Ægialitis meloda.** PIPING PLOVER; RING-NECK.—Common on the coast in the migrations. On the authority of Captain Crumb, it has been known to breed in the vicinity of Cobb's Island. I saw a Piping Plover near Virginia Beach in June, 1888.

109. **Ægialitis meloda circumcincta.** BELTED PIPING PLOVER.—"On May 3, 1884, a specimen of this species was obtained by A. Skinner on the shore of the Potomac River, opposite Washington, and is now in the National Museum" (The Auk, Vol. V, p. 147).

110. **Ægialitis wilsonii.** WILSON'S PLOVER; STUTTERING BIRD.—Not uncommon summer resident of the Coast region. Found breeding at Cobb's Island the last week in May, 1875, by Mr. H. B. Bailey although comparatively rare; the eggs were laid on the dry sand above high water mark, in a slight depression and were in all cases three in number. Captain C. H. Crumb has also found it breeding in the same locality. Dr. Brewer found several nests at Cape Charles, June 4th, 1852 (Water Birds of North America). One of these birds was shot on a sand bar in James River in Nelson County in August, 1887, by Lieutenant Wirt Robinson; it was in company with Spotted and Solitary Sandpipers and Killdeer (The Auk, Vol. VI, p. 195).

111. **Arenaria interpres.** TURNSTONE; CALICO-BACK; CHICKEN BIRD.—Common on the Eastern Shore in the migrations, some passing the winter. Frequents usually the beaches rather than the marshes. Several have been taken on the Potomac near Washington.

112. **Hæmatopus palliatus.** AMERICAN OYSTER CATCHER; SEA CROW.—Rather common summer resident on the Eastern Shore. Mr. Bailey found it breeding sparingly at Cobb's

Island in May, 1875, the nests observed by him containing three eggs. Captain Crumb has also found the nests and eggs. Dr. Brewer found eggs at Cape Charles in June, 1852.

113. **Colinus virginianus.** PARTRIDGE; QUAIL.—Abundant resident of the Virginias, found even at a high elevation on the mountains; breeds.

114. **Bonasa umbellus.** RUFFED GROUSE; PHEASANT.—Common resident of the wooded portions of the Virginias, especially in the mountains; breeds.

115. **Tympanuchus americanus.** PINNATED GROUSE; PRAIRIE HEN.—Mr. Ridgway records the killing of a Prairie Hen on the Virginia side of the Potomac, near Washington, March 17th, 1885 (Forest and Stream, Vol. XXIV, pp. 204 and 248). It has been suggested that it was a descendant of birds liberated previously at Snow Hill, Maryland.

116. **Meleagris gallopavo.** WILD TURKEY.—Common resident of the less thickly settled parts of the Virginias, although very shy. I have not met with the nest. It is found in the South-west Mountains of Albemarle, as well as in the ranges farther west.

117. **Ectopistes migratorius.** PASSENGER PIGEON.—A rather irregular winter visitor seen especially in autumn, but diminishing in numbers. It is more common in the mountain region than in eastern Virginia. [A specimen of the Ground Dove, (*Columbigallina passerina*,) an accidental visitor from the South, was taken near Washington many years ago. (Avifauna Columbiana, p. 91.)]

118. **Zenaidura macroura.** DOVE.—Abundant resident; breeds. I have found the nest in Albemarle County as early as April 16th.

119. **Cathartes aura.** TURKEY BUZZARD.—Abundant resident; may be seen sailing above the higher mountains and also on the sea-coast as well as in the other districts of the Virginias; breeds.

120. **Elanoides forficatus.** SWALLOW-TAILED KITE.—Accidental straggler. A specimen has been taken near Buckhannon, West Virginia, by Mr. E. L. Day; Mr. Doan speaks of another. Audubon in speaking of this bird says "Travelling

southward along the Atlantic coast, we find it in Virginia, although in very small numbers. Beyond that State it becomes more abundant. Near the Falls of the Ohio a pair had a nest and reared four young ones in 1820."

121. **Circus hudsonius.** MARSH HAWK.—Common resident in suitable localities; usually seen flying low over marshes on the coast, or over extensive fields in the interior. Abundant near Washington; rather common in Albemarle County; is found at Cobb's Island.

122. **Accipiter velox.** SHARP-SHINNED HAWK.—Rather common resident of the Virginias. Mr. Freke considers it not very common in Amelia County. Drs. Coues and Prentiss regard it as abundant about Washington. A nest with four eggs was found by Mr. Louis McCormick in Alexandria County, May 20th, 1882 (The Auk, Vol. V, p. 20).

123. **Accipiter cooperi.** COOPER'S HAWK; CHICKEN HAWK.—Rather common resident of eastern Virginia. A female of this species was noted by Mr. Brewster near Petroleum, West Virginia. Mr. H. K. Jamison found a nest containing four eggs in Fairfax County on May 5th 1884, and another containing three, two days later. Each nest was placed in the top of a pine (Ornithologist and Oölogist, Vol. IX, p. 145). It has also been known to breed near Washington.

124. **Accipiter atricapillus.** AMERICAN GOSHAWK.—Very rare winter visitor. Drs. Coues and Prentiss mention that it is occasionally observed near Washington. A specimen has been taken at Sandy Spring, Maryland, eighteen miles from that city (Report of Department of Agriculture for 1887, p. 405). Mr. Doan says it has been taken several times on the Ohio, and Audubon mentions that while travelling along that river he saw several in the train of millions of Wild Pigeons.

125. **Buteo borealis.** RED-TAILED HAWK; HEN HAWK.—Common resident of the Virginias. Has been found breeding at Sandy Spring, Maryland, by Dr. A. K. Fisher (The Auk, Vol. V, p. 18).

126. **Buteo lineatus.** RED-SHOULDERED HAWK; HEN HAWK.—Resident; less abundant than the preceding species. It is said to be common near Washington where Mr. Henshaw

has found several nests. A specimen taken in Albemarle or Louisa County was brought to me, November, 1888, and as many as sixteen were sent to the Department of Agriculture in 1887–8 from Sandy Spring, Maryland.

127. **Buteo latissimus.** Broad-winged Hawk.—Resident; rare and occasional about Washington. Dr. Fisher and Mr. Henshaw found a nest containing two eggs in Virginia not far from the city, in 1887. A specimen which a negro had shot was seen by Mr. Phillips in Warwick County, May, 1887 (Ornithologist and Oölogist Vol. XII, p. 122). It was found to be common and breeding, by Mr. Scott, in the mountains near Coalburg, West Virginia. Mr. Doan calls it tolerably common and says he took several specimens in West Virginia.

128. **Archibuteo lagopus sancti-johannis.** American Rough-legged Hawk.—Winter visitor. One of these birds was seen on the Virginia shore of the Potomac opposite Washington, December 29, 1879, by Mr. H. W. Henshaw. It has also been taken in or near the District of Columbia (The Auk, Vol. I, p. 397). Dr. M. G. Ellzey speaks of this species, besides others, as being very numerous in Howard County, Maryland, during the winter and spring of 1887–88 (Forest and Stream, Vol. XXXII, p. 212). Mr. E. A Brooks of French Creek, Upshur County, West Virginia, has reported it to the Department of Agriculture as a rare winter visitor.

129. **Aquila chrysaetos.** Golden Eagle.—Drs. Coues and Prentiss report this eagle to be apparently not very rare near Washington in winter. Two specimens from that neighborhood are preserved in the Smithsonian Institution. It has been taken near Gaithersburg, Maryland. Mr. Doan mentions having seen portions of a specimen captured in Pocahontas County, West Virginia.

130. **Haliæetus leucocephalus.** Bald Eagle.—Common resident on the coast and along the larger rivers of the Tidewater region. Stragglers are occasionally to be found in the interior; breeds. Said by Mr. Doan to be of frequent occurrence throughout the Ohio Valley in early spring and fall, and to breed in suitable places in the eastern portions of West Virginia. At Cobb's Island they destroy many water-fowl in winter. Mr.

Brewster gives an interesting account of their habits as observed at that place (Bull Nuttall Orn. Club, Vol. V, p. 57).

131. **Falco peregrinus anatum.** Duck Hawk.—Not uncommon on the Eastern Shore especially in autumn. I have examined specimens taken at Cobb's Island. A single bird of this species was seen by Mr. William Palmer on the Potomac at Washington, December, 1878. On the authority of Mr. Jouy, it has been known to breed at Harper's Ferry, Virginia. It very probably also breeds in other localities in the Virginia mountains, as it has been found to do in the corresponding regions of North and South Carolina by Messrs. Brewster and Loomis (The Auk, Vols. III and VI). In most parts of the Virginias it is rare or unknown. Mr. Doan, however, calls it a common resident in portions of the West Virginia mountains visited by him.

132. **Falco columbarius.** Pigeon Hawk.—Rather rare and seldom observed, but probably resident near Washington; Dr. Fisher has taken a specimen in Virginia near that city, and Lieutenant Wirt Robinson has observed it in the State; it has also been taken near Cobb's Island. Mr. F. L. Washburn of Johns Hopkins University has reported to the Department of Agriculture that he observed several pairs apparently breeding, at Harper's Ferry, April 12th, 1887.

133. **Falco sparverius.** Sparrow Hawk.—Common resident; breeds. One of the most abundant Hawks in eastern Virginia. It is known to have nested in the Smithsonian building at Washington.

134. **Pandion haliaetus carolinensis.** Fish Hawk.—Common summer resident, from March to October, of Tidewater Virginia and the Coast region; less numerous along the rivers of the interior; breeds. Mr. Freke found it rather uncommon in Amelia County. I have known of its occurrence in Albemarle County. It is found also in Upshur County, West Virginia.

135. **Strix pratincola.** American Barn Owl.—Rare in eastern Virginia. I have seen a stuffed specimen of this bird, that had been shot on Cobb's Island by Mr. Elkanah Cobb. From information that he has received, Captain Crumb is led to believe that one of these birds bred in a barn on Mockhorn Island. Mr. Jouy says that although not a common bird in the District of

Columbia it is occasionally seen flying over the marshes and that some years ago a family of Barn Owls were destroyed in one of towers of the Smithsonian Institution (Field and Forest Vol. III, p. 51). Two of the eggs taken from that building are in the collection of the National Museum (The Auk, Vol. V, p. 20). I have seen the skin of a specimen shot in Albemarle County, December, 1889. Mr. Doan says he found it common in some of the mountain districts of West Virginia.

136. **Asio wilsonianus.** Long-eared Owl.—Resident, but seldom seen. It is reported to be more abundant than the Great Horned Owl, less so than the Screech Owl in the neighbourhood of Washington, where, on the authority of Mr. Henshaw, it breeds. It has been met with in Virginia by Lieutenant Wirt Robinson and I have known of one or more having been caught in a trap in Albemarle County in the winter of 1887–8. It has been said to occur in West Virginia.

137. **Asio accipitrinus.** Short-eared Owl.—Rather common resident in Tidewater Virginia. Common in the vicinity of Washington, except in summer, along the shores of the Potomac, and has been taken in the streets of the city. Not uncommon at Cobb's Island, where it is usually met with in autumn and winter. It has also been observed in Virginia by Lieutenant Robinson. Mr. Doan gives it as a West Virginia species.

138. **Syrnium nebulosum.** Barred Owl.—A not common resident. Mr. Freke, however, reports it as rather a common species in Amelia County, and says he has often sat near a tree on which the young were perched and watched the proceedings of the parents. One individual was noted by Mr. W. D. Scott in 1872 near Coalburg, West Virginia, flying low at dusk over the Kanawha River. Mr. Richmond refers to its breeding in Maryland and Virginia (The Auk, Vol. V, p. 20), and Lieutenant Robinson has met with it. According to Dr. J. R. Mathers and Mr. E. A. Brooks it is found in Upshur County, West Virginia.

139. **Nyctala acadica.** Saw-whet Owl.—Rare. Captain C. H. Crumb writes, "Two have been taken on Cobb's Island within the last few years. A resident on the mainland." Several have been found near Washington (The Auk, Vol. I, p. 397),

and Audubon says that it is frequent in the swamps of Maryland during the whole year.

140. **Megascops asio.** Screech Owl.—Common resident of the Virginias; breeds. Our most familiar species.

141. **Bubo virginianus.** Great Horned Owl.—Rather common resident of the Virginias; breeds.

142. **Nyctea nyctea.** Snowy Owl.—Rare winter visitor. One specimen was observed in Buckingham County in the winter of 1877 by Lieutenant Wirt Robinson (The Auk, Vol. VI, p. 195). The species is known at Cobb's Island where it has been seen on more than one occasion. Captain Crumb has taken one specimen there. It is reported by Dr. J. R. Mathers and Mr. E. A. Brooks to be a rare winter visitor in Upshur County, West Virginia. It has been occasionally met with near Washington.

(The Carolina Paroquet (*Conurus carolinensis*) although a flock was seen as recently as 1865 (The Auk, Vol. V, p. 148), can no longer be regarded as a Virginia bird, though formerly not uncommon.)

143. **Coccyzus americanus.** Yellow-billed Cuckoo; Rain Crow.—Rather common summer resident of the Virginias, arriving early in May and leaving the end of September; breeds. Two nests were found in June, 1883 at Fairview, Hancock County, West Virginia by Rev. W. E. Hill (O. and O. Vol. IX, pp. 114 and 115).

144. **Coccyzus erythrophthalmus.** Black-billed Cuckoo; Rain Crow.—Rather common summer resident of the Virginias; arrives and departs at about the same time as the preceding species; breeds.

145. **Ceryle alcyon.** Belted Kingfisher.—Everywhere common; resident or nearly so in the warmer districts, summer resident in other parts of the two States; breeds.

(The Ivory-billed Woodpecker (*Campephilus principalis*) may formerly have been found in Virginia.)

146. **Dryobates villosus.** Hairy Woodpecker.—Not common resident in the cultivated districts; more numerous in the forest regions of the Virginias; breeds.

147. **Dryobates pubescens.** Downy Woodpecker.—Everywhere a common resident; breeds.

148. **Dryobates borealis.** RED-COCKADED WOODPECKER.—I have found this species occasionally in Albemarle County, although it is rare. Individuals were observed in the months of January, April, May and September. I know of no other record for the Virginias, but it will probably prove to be not uncommon south of the James River.

149. **Sphyrapicus varius.** YELLOW-BELLIED WOODPECKER. Rather common in winter and in the migrations, some individuals probably remaining to breed in the colder parts of the mountain region. Mr. Richmond does not include it in his list of birds breeding in the District of Columbia, although Drs. Coues and Prentiss class it with the permanent residents. I have seen a bird of this species in July on the White Top Mountain. It is said to be found in West Virginia.

150. **Ceophlœus pileatus.** PILEATED WOODPECKER; LOG COCK.—Not uncommon resident of the less thickly settled parts of the Virginias; reported by Mr. Scott as breeding in Kanawha County, West Virginia.

151. **Melanerpes erythrocephalus.** RED-HEADED WOODPECKER.—Rather common summer resident of the Virginias usually arriving in April and leaving in October; breeds. Dr. Ellzey reports some wintering in Howard County, Maryland, during the winter of 1887-88, and also in a previous year at Cedar Park, West River, Maryland (Forest and Stream, Vol. XXXII, p. 212). Mr. E. A. Brooks also reports it as sometimes remaining at that season in Upshur County, West Virginia. This species appears to me to have become somewhat less numerous in Albemarle County of late years,

152. **Melanerpes carolinus.** RED-BELLIED WOODPECKER.—Not very common resident in eastern Virginia. Mr. Freke found it not uncommon in Amelia County and in Albemarle County, I have found it by no means rare. Mr. Phillips reports it from Warwick County. Mr. Brewster found it not common in Ritchie County, West Virginia; about half a dozen were noted. I have not observed it in the mountain region. It has been seen in the breeding season near Washington (The Auk, Vol. V, p. 21).

153. **Colaptes auratus.** GOLDEN-WINGED WOODPECKER; FLICKER; YUCKER.—Everywhere a common resident; breeds.

154. **Antrostomus carolinensis.** Chuck-will's Widow.—Summer resident in south-east Virginia. This species occurs on the Eastern Shore and is reported to the Department of Agriculture by Mr. C. R. Moore of Bird's Nest, Northampton County, who gives the end of April as the time of its arrival. A specimen from that place was received by the Department, May 17, 1890. I have been informed of its occurrence in the same County by Captain C. H. Crumb who took a specimen at Cobb's Island, several years ago. Mr. B. W. Jones of Spottsville, Surry County (in the Southside Peninsula) also writes to the Department of Agriculture: "It is about as common here in summer as the Whip-poor-will. We may often hear several of both birds any summer evening. It appears to be more abundant now than formerly. Its note makes it impossible to mistake it." Mr. J. H. Allen considers it common at Toano, James City County.

155. **Antrostomus vociferus.** Whip-poor-will.—Common summer resident of the Virginias; less numerous in the mountain region, arriving in April and leaving in October. Mr. H. K. Jamison discovered four nests in Fairfax County in May and June, 1884, (O. and O. Vol. IX p. 145) and Rev. W. E. Hill one in Hancock County, W. Va., May 16. 1883. (O. and O. Vol. IX, p. 89.)

156 **Chordeiles virginianus.** Night Hawk; Bull Bat.—Common in the migrations in the Virginias, and remains to breed in many localities. It arrives in April or early in May, and leaves the latter part of September. I am informed that it breeds commonly on the beaches at Cobb's Island. A few are said to breed in the neighborhood of Washington. It is especially abundant in the latter part of August.

157. **Chætura pelagica.** Chimney Swift.—Everywhere an abundant summer resident, arriving in April and leaving in October; breeds.

158. **Trochilus colubris.** Humming Bird.—Common summer resident of the Virginias, arriving the latter part of April and departing the end of September; breeds.

159. **Milvulus forficatus.** Scissor-tailed Flycatcher.—Accidental visitor. An individual of this species was shot January 2, 1882, by Mr. R. B. Taylor in his door yard at Norfolk, Vir-

ginia, and was sent to the Smithsonian Institution. (Bull Nuttall Orn. Club, Vol, VIII, p. 59.) There is a doubtful record of one said to have been seen near Washington. (Avifauna Columbiana, p. 75.) Captain C. H. Crumb informs me that he has taken a bird at Cobb's Island, which he is confident belonged to this species.

160. **Tyrannus tyrannus.** KING BIRD; BEE MARTIN.—Common summer resident of the Virginias arriving in April and leaving in September; breeds.

161. **Myiarchus crinitus.** GREAT-CRESTED FLYCATCHER.—Common summer resident of the Virginias from the latter part of April to the latter part of September; breeds.

162. **Sayornis phœbe.** PEWEE.—Almost everywhere a common summer resident, arriving early in March and leaving in October. Individuals may occasionally be seen in winter in some localities. I have frequently observed the nest in Albemarle County and have seen others at the Blue Ridge Springs, Botetourt County, in the railway cutting at Kanawha Falls and at the Sweet Springs, Monroe County, West Virginia.

163. **Contopus borealis.** OLIVE-SIDED FLYCATCHER.—Rare in the migrations. Probably most common in the mountain region where it is also to be seen in summer. Mr. Ridgway noticed several of these birds in September, 1881, near Falls Church, Virginia, and Dr. A. K. Fisher took a male in the Bull Run Mountains, May 14th, 1887 (The Auk, Vol. V, p. 148). I have not met with it. Mr. Doan mentions that he captured two on the Little Kanawha River, September 30th, 1888.

164. **Contopus virens.** WOOD PEWEE.—Abundant summer resident of the Virginias, arriving the end of April or early in May and departing early in October; breeds.

165. **Empidonax flaviventris.** YELLOW-BELLIED FLYCATCHER—Rather rare in the migrations. Dr. Fisher informs me that it is a tolerably common migrant near Washington in May, and in the latter part of August and first half of September, and that he secured one at Gainesville, Prince William County, May 14, 1887. He has generally found it in the scrub pines. I have never met with it. On the authority of Mr. Ingersoll it is found in Ritchie County, West Virginia, in spring, (Forest and Stream, Vol. IV, p. 358), and Rev. W. E. Hill captured a speci-

men in Hancock County, West Virginia, May 16, 1883. (O. and O., Vol. IX., p. 89.) Mr. Doan reports that he saw a stuffed specimen that had been shot near Charleston, Kanawha County, in the spring of 1887.

166. **Empidonax acadicus.** Acadian Flycatcher.—Common summer resident in eastern Virginia, arriving the latter part of April or early in May, and departing late in September. Two were observed by the Rev. W. E. Hill at Fairview, West Virginia, May 24, 1883. (O. and O., IX., p. 102.) Mr. Brewster mentions that it undoubtedly occurs in Ritchie County, as several old nests were seen by Mr. Ingersoll. In Albemarle County, where the species is numerous, I found a nest containing three eggs June 2, 1885. It is a common breeder near Washington.

167. **Empidonax pusillus traillii.** Traill's Flycatcher.—Rare in the migrations near Washington. One was taken May 13, 1888, at Potomac Run, Alexandria County, Virginia, and another May 19, in Virginia opposite Georgetown, District of Columbia. Several others were subsequently seen and identified in the neighborhood of Washington. (The Auk, Vol. VI, p. 71.)

168. **Empidonax mimimus.** Least Flycatcher.—Rather common migrant near Washington arriving the last week in April and the early part of May, returning the latter part of August and remaining a few weeks. I have found it rather rare in Albemarle County. It is a rather common summer resident in the mountain region, where it undoubtedly breeds. I have observed it at the Blue Ridge Springs in the latter part of May, and at the Bath Alum Springs and on the Salt Pond Mountain in June. Mr. Brewster reports only one taken on the 7th of May during his visit to Ritchie County, West Virginia. Mr. E. A. Brooks reports it from Upshur County, West Virginia. Mr. Phillips' record of this species in Warwick county, the last week in May, 1887, probably relates to *E. acadicus*.

169. **Otocoris alpestris.** Horned Lark; Shore Lark.—Winter visitor. This is the usual form on the coast of the Eastern States and is the one common at Cobb's Island, where specimens taken by Captain C. H. Crumb have been invariably females. It is also found in Albemarle County. Shore Larks of either this or the following sub-species are also common in other suitable

localities in the interior and have been observed in Hancock County, West Virginia, by Rev. W. E. Hill.

170. **Otocoris alpestris praticola.** Prairie Horned Lark.—This sub-species occurs near Washington and in Albemarle County, and in most parts of the Virginias except near the coast is probably commoner than the other.

171. **Cyanocitta cristata.** Blue Jay.—Rather common resident of the Virginias; breeds.

172. **Corvus corax sinuatus.** American Raven.—Found by Mr. Ridgway to be an inhabitant of Cobb's, Bone and Mockhorn Islands in July, 1880. Solitary individuals were observed almost every day during his stay of two weeks. It is also found in the mountain region. The determination of the different subspecies of American Ravens has not yet been accomplished.

173. **Corvus americanus.** American Crow.—Abundant resident of the Virginias; breeds.

174. **Corvus ossifragus.** Fish Crow.—Common resident of the Eastern Shore and Tidewater region; breeds. Mr. Ridgway has reported it as common at Charlottesville, Albemarle County (Bull Nuttall Club, Vol. VII, p. 250). Mr. Doan mentions having seen two on the Ohio, October 2d, 1888.

175. **Dolichonyx oryzivorus.** Bobolink; Reed Bird; Ortolan.—Common migrant in eastern Virginia in suitable localities. In spring it is found in open meadows during the latter part of April and the first half of May. In September, it is abundant in flocks in the marshes bordering the rivers of the Tidewater region. A few individuals were seen May 14th, 1874, by Mr. Ingersoll in the grassy meadows along the creek near Petroleum, West Virginia. A pair were observed June 14th, 1883, at Fairview, West Virginia, where the species is rare, by the Rev. W. E. Hill who inferred that they bred in this instance. It probably breeds also in other localities and has been given by Dr. J. R. Mathers as a summer resident in Upshur County.

176. **Molothrus ater.** Cow Bird.—Not uncommon summer resident of the Virginias from March to October; some may winter; chiefly seen in spring and autumn, at the latter season in flocks; breeds. Its habit of laying its eggs in the nests of other birds is well known.

177. **Xanthocephalus xanthocephalus.** Yellow-headed Blackbird.—Accidental visitor from the West. Dr. J. R. Mathers took one in the spring of 1888 near Buckhannon, Upshut County, West Virginia.

178. **Agelaius phœniceus.** Red-winged Blackbird.—Common summer resident in the Virginias in swamps and marshes and is found in suitable localities even in the mountains; in some districts it is nearly resident; breeds. Found in early autumn in large flocks, in marshes along the large rivers.

179. **Sturnella magna.** Meadow Lark.—Common resident of the Virginias; breeds.

180. **Icterus spurius.** Orchard Oriole.—Not uncommon summer resident of the Virginias, chiefly migratory in the warmer districts; arrives the latter part of April or early in May; breeds. It was unusually abundant in the city of Washington in the spring of 1882.

181. **Icterus galbula.** Baltimore Oriole.—Common summer resident of the Virginias, and breeds, but more numerous in the migrations. Arrives the latter part of April and leaves in September.

182. **Scolecophagus carolinus.** Rusty Blackbird.—Common winter resident of the Tidewater region near Washington; found ordinarily in flocks. It is not common in the interior. I have met with it once in Albemarle County, and Mr. E. A. Brooks has found it rare in Upshur County, West Virginia. It has also been observed in Virginia by Lieutenant Wirt Robinson.

183. **Quiscalus quiscula.** Purple Grackle; Crow Blackbird.—Common summer resident (nearly resident in the warmer districts), usually arriving in March; breeds. More numerous in the migrations.

184. **Quiscalus quiscula æneus.** Bronzed Grackle.—The Grackles west of the Alleghanies are usually found to be of this sub-species. Mr. Brewster found typical specimens at Petroleum, West Virginia, where they were common and breeding. A specimen has been taken at Fall's Church, Virginia, and one near Buckhannon, West Virginia. Individuals are frequently found in the neighborhood of Washington, but are not known to breed there (The Auk, Vol. V, p. 19).

185. **Quiscalus major.** Boat-tailed Grackle.—Summer resident, found only in the Coast region. It is not uncommon in the neighborhood of Cobb's Island and breeds. According to the late Mr. E. A. Small it breeds as far north as Kent County, Maryland (O. and O., Vol. VIII, p. 76).

186. **Pinicola enucleator.** Pine Grosbeak.—Said to be an extremely rare, and probably only accidental, visitor near Washington in severe winters. (Avifauna Columbiana, p. 56.) Audubon (Birds of America, Vol. p. 179) says "Some have been procured near the mouth of the Big Guyandotte on the Ohio."

187. **Carpodacus purpureus.** Purple Finch.—Rather common winter resident in eastern Virginia. I have found it common in Albemarle County in spring, frequenting beech trees, to whose blossoms it is very partial. A single male was seen by Mr. Ingersoll near Petroleum, West Virginia, April 29th, where it has been reported as rare in spring. Probably a summer resident in the higher mountain region. Mr. Brooks calls it a common winter resident in Upshur County, West Virginia.

188. **Loxia curvirostra minor.** American Crossbill.—Uncommon winter resident. A flock of about twenty were seen by Mr. William Palmer early in December, 1874, in Alexandria County, Virginia, and about two weeks later he shot one, a female, out of a flock of five. These birds have also been met with by other observers in the neighborhood of Washington. Dr. M. G. Ellzey says that in 1877 he saw a small flock about Warrenton, Fauquier County, and in 1855 immense numbers of them at Ball's Bluff near Leesburg (Forest and Stream, Vol. XXXII, 1889, p. 212). An adult male accompanied by one young bird was seen by Mr. H. M. Smith, May 17th, 1885, and the species has been known to breed in Maryland (The Auk, Vol. V, p. 22). It has been found in the highest part of the mountain region of North Carolina in summer by Mr. William Brewster and is probably to be met with in the corresponding portions of the Virginias.

189. **Loxia leucoptera.** White-winged Crossbill.—Accidental winter visitor or straggler near Washington. Specimens were taken about the year 1874 by Mr. Henry Marshall at Laurel, Maryland. Mr. Doan says that several have been taken

by Mr. Brown of Parkersburg, West Virginia, on the east slope of the Alleghanies during severe winters [(The common Redpoll, *Acanthis linaria*, is said to be a rare or accidental visitor near Washington, (Avifauna Columbiana, p. 57).]

190. **Spinus tristis.** YELLOW BIRD; AMERICAN GOLDFINCH; LETTUCE BIRD.—Common resident of the warmer parts of the Virginias; eleswhere a summer resident; breeds.

191. **Spinus pinus.** PINE FINCH.—Irregular and not common winter visitor. Dr. Fisher informs me that it was common around Washington during January and February, 1887, and Mr. F. M. Chapman observed it in Virginia, near Washington, in November of the same year. Not yet reported from other localities in the Virginias. It is probably to be found in summer in the higher mountain region.

192. **Passer domesticus.** ENGLISH SPARROW.—Everywhere a more or less abundant resident in the cities, towns and villages; breeds.

193. **Plectrophenax nivalis.** SNOW BUNTING.—Rare winter visitor. A single specimen was obtained out of a flock of Shore Larks in Chesterfield County, November 12th, 1881, in stormy weather by Lieutenant Wirt Robinson, the only occasion he has met with it in the State (The Auk, Vol. VI, p. 195) Captain Crumb writes from Cobb's Island in 1889: "Rare winter visitor. I have taken three since 1880, one this winter." It is said to be a rare and irregular winter visitor near Washington, and has been reported from Upshur County, West Virginia, by Mr. E. A. Brooks.

194. **Calcarius lapponicus.** LAPLAND LONGSPUR.—Very rare winter visitor. Half a dozen or more were observed by Dr. A. K. Fisher and Mr. H. W. Henshaw in a flock of Shore Larks, December 11th, 1886, on the road from Washington to Falls Church, Virginia (The Auk, Vol. IV, p. 347).

195. **Poocætes gramineus.** GRASS FINCH; BAY-WINGED SPARROW; VESPER SPARROW.—Common resident or summer resident of the Virginias according to locality. Perhaps only a winter resident in the warmer districts. I have not satisfied myself that it is a summer resident of the eastern part of Albemarle County although very numerous at other seasons, especially in

autumn. It is said to be rather a common breeder near Washington, and I have found it in the breeding season in the mountain region. Mr. Brooks calls it a common summer resident in Upshur County, West Virginia.

196. **Ammodramus princeps.** Ipswich Sparrow.—Common in winter at Cobb's Island where it is less shy than reported by most writers, sometimes feeding about the Life Saving Station there, with almost the familiarity of the English Sparrow.

197. **Ammodramus sandwichensis savanna.** Savanna Sparrow.—Common migrant in the Tidewater region and on the Eastern Shore. Some probably winter. Rare in the interior. Not yet reported from West Virginia.

198. **Ammodramus savannarum passerinus.** Yellow-winged Sparrow.—Summer resident in eastern Virginia, locally distributed in old fields and meadows, rare in many localities. Mr. Freke considered it not uncommon in Amelia County, and it is said to be abundant near Washington, where it is a common breeder. I have observed a bird of this species but once in Albemarle County. Mr. Phillips found it common in Warwick County in May, 1887 Not recorded from West Virginia.

199. **Ammodramus henslowii.** Henslow's Sparrow.—Summer resident in eastern Virginia ; not generally distributed. It has been met with by Mr. Freke on but one occasion, April 8th, in Amelia County. Mr. Phillips obtained a female, the only one seen in Warwick County, May, 1887. It has been found to be not uncommon near Washington, especially around Fall's Church, Virginia. Mr. Jouy and others have found nests and eggs.

200. **Ammodramus caudacutus.** Sharp-tailed Finch.—Rather common summer resident, and breeds at Cobb's Island. Probably found at other points in the Coast region. A specimen was taken near Washington, September, 1862 by Mr. C. Drexler.

201. **Ammodramus maritimus.** Seaside Finch.—Summer resident on the coast; common and breeds at Cobb's Island.

202. **Chondestes grammacus.** Lark Sparrow.—A straggler from the West. One was obtained at Fort Runyon, Virginia, near Washington, August 25th, 1877, by Mr. W. F. Roberts. The same summer Mr. R. Ridgway observed one in

the Smithsonian grounds, and the same or another was seen about the same time. Other individuals were taken elsewhere in the Atlantic States that year. (Avifauna Columbiana, p. 66.)

203. **Zonotrichia leucophrys.** White-crowned Sparrow.—Rare in winter and in the migrations. Drs. Coues and Prentiss report it as usually rare near Washington, but have known it to be in occasional years quite plentiful. Dr. Fisher informs me that a few are seen there every fall; he took specimens at Munson's Hill, Virginia, October 13th, 1889. A single specimen was observed by Mr. Ingersoll in Ritchie County, West Virginia, and Rev. W. E. Hill reports it to the A. O. U. committee on migration as observed by him May 11, 1884, in Hancock County. Mr. E. A. Brooks calls it a rare visitor in Upshur County. Mr. Doan mentions having observed it along the Ohio.

204. **Zonotrichia albicollis.** White-throated Sparrow.—Common winter resident of the Virginias, from October to the middle of May; more abundant in the migrations.

205. **Spizella monticola.** Tree Sparrow.—Common winter resident of the Virginias.

206. **Spizella socialis.** Chipping Sparrow.—Summer resident of the Virginias from March to October; breeds. Abundant except in parts of the mountain region.

207. **Spizella pusilla.** Field Sparrow.—Common and more or less resident in the Virginias according to locality; breeds. Abundant in spring and autumn in eastern Virginia.

208. **Junco hyemalis.** Snow Bird. Abundant winter resident of the Virginias from the middle of October to the last of April. Mr. C. W. Beckham took, in Howard County, Maryland, a specimen with white wing bars, as distinct as in *J. aikeni* (The Auk, Vol. II, p. 306).

209. **Junco hyemalis carolinensis.** Carolina Junco; Snow Bird.—Abundant and breeds on White Top Mountain. It is at present uncertain whether all the Snow Birds which breed in the mountains of Virginia are typical or not of this sub-species. As Mr. Brewster suggests (The Auk, Vol. III, p. 109) it is not improbable that some may be intermediate. I have also observed Snow Birds in summer on the Salt Pond Mountain and on the summit of Humpback Mountain in the Blue

Ridge. They are not found in the main Alleghany Range near the White Sulphur Springs, and I cannot recollect having seen them on the Warm Spring Mountain in Bath County. Mr. Doan says he found Snow Birds on Rich Mountain, West Virginia, where they are also reported to breed.

210. **Melospiza fasciata.** Song Sparrow.—Common in the Virginias, in many localities resident. I have found it a common winter resident in the less elevated part of Albemarle County, where it apparently does not remain to breed, and Mr. Freke also reports it as a winter resident in Amelia County. Mr. Phillips, however, found it abundant in Warwick County the end of May. Mr. Scott found it breeding in Kanawha County, and it breeds commonly around Washington. It is also reported to breed in Upshur County.

211. **Melospiza lincolni.** Lincoln's Sparrow.—This species has been found in Virginia near Washington by Mr. H. W. Henshaw and several other specimens have been taken not far from that City (The Auk, Vol. V, p. 148). Mr. Doan says he took one September 26, 1888, in the Ohio Valley.

212. **Melospiza georgiana.** Swamp Sparrow.—A not abundant migrant in suitable localities; some doubtless winter. Mr. Brewster found it not common in spring near Petroleum, West Virginia. I have found it rare in spring in Albemarle County, probably due in part to the comparative absence of places suitable to its habits. It has been observed elsewhere in Virginia by Lieutenant Wirt Robinson. It is not uncommon near Washington.

213. **Passerella iliaca.** Fox-colored Sparrow.—A not very abundant winter resident of the Virginias; more numerous in the migrations.

214. **Pipilo erythrophthalmus.** Towhee Bunting; Ground Robin; Chewink.—Common in the Virginias, in the warmer localities chiefly a migrant. It is an abundant summer resident and breeds, in the mountain region, where it is one of the characteristic birds, frequenting the scrub growth on the tops of the mountains. Many undoubtedly breed in Albemarle County where I have found a young bird that had shortly left the nest, and it breeds commonly about Washington. Two specimens

have been taken in the District of Columbia by Mr. Jouy, with white marks on the scapulars resembling var. *arcticus* (Field and Forest, Vol. III, p. 79).

215. **Cardinalis cardinalis.** Redbird.—Common resident of the Virginias; less abundant in the mountain region; breeds. I have several times found the nest in Albemarle County.

216. **Habia ludoviciana.** Rose-breasted Grosbeak.—Not common summer resident of the Virginias, most numerous in spring. In the spring of 1882 it was unusually abundant in the vicinity of Washington, many entering the city. A nest with three fresh eggs was found by Rev. W. E. Hill at Fairview, West Virginia, June 1st, 1883 (O. and O. Vol. IX, p. 103). Mr. E. A. Brooks reports it to the Department of Agriculture as a rare summer resident in Upshur County. I have only observed it in Albemarle County in May in the tops of high trees, such as oaks, for example.

217. **Guiraca cærulea.** Blue Grosbeak.—Not uncommon summer resident in eastern Virginia, arriving early in May. I found a nest containing three eggs in Albemarle County, June 3d, 1885, and Dr. A. K. Fisher one, also containing three eggs, at Gainesville, Prince William County, August 1st, 1886. This species is rare in Upshur County, West Virginia. I have not observed it in the mountain region.

218. **Passerina cyanea.** Indigo Bird.—Common summer resident of the Virginias from about the first of May to the first of October; breeds. I found a nest in Albemarle County in June, 1885. It is a common breeder around Washington. Rev. W. E. Hill found a nest with two eggs at Fairview, West Virginia, June 12, 1883 (O. and O. Vol. IX, p. 114).

219. **Spiza americana.** Black-throated Bunting; Dickcissel.—Not common summer resident. It was formerly abundant in the vicinity of Washington, where it bred, but is now extremely rare there. Mr. Phillips found it rather uncommon in Warwick County, in May, 1887, where a few were noted in the open fields, retreating to the thicket at the first alarm (O. and O. Vol. XII, p. 121). Lieutenant Wirt Robinson has also met with it. Mr. Doan says it is tolerably common in the Ohio Valley.

220. **Piranga erythromelas.** Scarlet Tanager.—Not uncommon in the migrations in the Virginias, arriving about the first of May, some remaining to breed in the cooler districts. A nest containing two of its eggs with two of the Cow Bunting were found May 24th, 1883 at Fairview, West Virginia, by the Rev. W. E. Hill. Mr. Richmond reports it as breeding quite rarely near Washington.

221. **Piranga rubra.** Summer Red Bird.—A not uncommon summer resident of the warmer parts of the Virginias, arriving the last of April or early in May, and leaving in September. A male was obtained by Mr. Brewster in Ritchie County and two females by Mr. Scott in Kanawha County, West Virginia. I have also seen a male at the Blue Ridge Springs in the lower mountain region. A nest containing three fresh eggs was found near Washington by Mr. Richmond, July 4th, 1885. (The Auk, Vol. V, p. 23).

222. **Progne subis.** Purple Martin.—Common summer resident of the Virginias, although locally distributed. Arrives in April and leaves the latter part of August or early in September. It usually breeds in the boxes put up for its occupancy. At Washington it sometimes nests in the capitals of the columns of the public buildings, and some years ago I saw the nests on the large hotel at the White Sulphur Springs, West Virginia.

223. **Petrochelidon lunifrons.** Cliff Swallow.—Summer resident of the Virginias, not very common and very irregularly distributed, being unknown in many localities; breeds. Arrives in April and leaves in September.

224. **Chelidon erythrogaster.** Barn Swallow.—Common summer resident of the Virginias, from April to September, frequenting especially the neighborhood of barns and old buildings, on which it constructs its nest.

225. **Tachycineta bicolor.** White-bellied Swallow.—Common summer resident of the Tidewater region, from April to September but rare away from the rivers. A single specimen was observed by Mr. Ingersoll, on the 29th of April, in Ritchie County, West Virginia. Several were seen by Mr. F. L. Washburn of Johns Hopkins University at Harper's Ferry, April 8, 1887.

226. **Clivicola riparia.** Bank Swallow.—Common summer resident in suitable localities especially in the Tidewater region, arriving in April and departing in September; breeds. Common near Buckhannon, West Virginia. Mr. Scott found it common in places in Kanawha County, and breeding in the high banks of the Kanawha river.

227. **Stelgidopteryx serripennis.** Rough-winged Swallow.—Rather rare and irregularly distributed summer resident. It is said to be not common near Washington but may be found along the river in the neighborhood of Little Falls where it breeds on the cliffs. Mr. Freke saw this species once and probably oftener in Amelia County. I have observed a few at the Blue Ridge Springs, Botetourt County, in the latter part of May. Mr. Scott reports it rare near Coalburg, West Virginia, where a single specimen was taken. Mr. Doan says he found it common around Buckhannon and Fairmont, West Virginia.

228. **Ampelis cedrorum.** Cedar Bird.—Common resident of the Virginias, seen at irregular intervals more frequently in autumn. It is the latest of the summer residents to breed.

229. **Lanius borealis.** Northern Shrike.—Very rare winter visitor near Washington where a few specimens have been procured. Dr. A. K. Fisher obtained one in Virginia not far from the city, November 11th, 1887.

230. **Lanius ludovicianus.** Loggerhead Shrike.—Not common in eastern Virginia. Several specimens have been taken near Washington where it is rare. Mr. Freke reports it as by no means common in Amelia County, where he took a pair on March 16th and 20th and has occasionally seen a solitary individual in other years. Mr. Sennett noticed it exposed for sale in the market of Norfolk, March 28, 1885. Mr. Phillips says he found it common in Warwick County, the last week in May, 1887. It has also been met with by Lieutenant Wirt Robinson, and a specimen has been taken by Hon. John S. Wise.

231. **Lanius ludovicianus excubitorides.** White-rumped Shrike.—Birds intermediate in plumage between this and *ludovicianus* but approaching more nearly *excubitorides* have been found in Albemarle County. A perfectly typical *excubitorides* however has not yet been reported.

232. **Vireo olivaceus.** Red-eyed Vireo.—Abundant summer resident of the Virginias, arriving in April and departing the latter part of September; breeds.

233. **Vireo philadelphicus.** Philadelphia Vireo.—Very rare. A specimen was taken on the Virginia side of the Potomac near Washington, May 17, 1888, by Mr. William Palmer (The Auk, Vol. VI, No. 1, p. 74).

234. **Vireo gilvus.** Warbling Vireo.—Rather common summer resident of the Virginias, but locally distributed in the vicinity of towns and villages or in orchards and similar localities; breeds. Arrives in April and leaves in September.

235. **Vireo flavifrons.** Common summer resident of the Virginias from April to September; breeds.

236. **Vireo solitarius.** Not common in the migrations in the Virginias, arriving in April and in autumn seen as late as October; some may remain to breed.

237. **Vireo solitarius alticola.** Mountain Solitary Vireo.—I found this sub-species common on the upper part of White Top Mountain in July, 1888, where it probably breeds. It is doubtless a summer resident on others of the higher Virginia mountains.

238. **Vireo noveboracensis.** White-eyed Vireo.—Common summer resident of the Virginias, from April to September, in the vicinity of swampy thickets; breeds. I have found it common near Newport News in April, and discovered a nest with four eggs in Albemarle County, June 1st, 1885.

239. **Mniotilta varia.** Black and White Creeper.—Common summer resident of the Virginias, especially of the mountain region, arriving about the middle of April; in the warmer localities more numerous in the migrations. It breeds in Albemarle County, as I saw a young bird and its parent June 1st, 1885.

240. **Protonotaria citrea.** Prothonotary Warbler.—Very rare. One has been reported by Drs. Coues and Prentiss as seen near Washington in a swampy briar patch, May 2, 1861. I have seen a specimen obtained by Captain Crumb at Cobb's Island in the spring of 1888, and have been informed by Mr. Ridgway that he has seen one near Thoroughfare Gap in the

Bull Run Mountains. One was seen by Lieutenant Wirt Robinson in King William County, April 29, 1879 (The Auk, Vol. VI, p. 195) and Mr. Doan says he took one near Buckhannon, West Virginia, August 3, 1888.

241. **Helmitherus vermivorus.** Worm-eating Warbler.—Not uncommon summer resident of the Virginias, arriving in Albemarle County the last week in April. I have found two nests of this bird near the line between Albemarle and Louisa Counties, one, containing four eggs, May 19, 1884, and the other containing five, May 28, 1885. Both were placed on the ground and both were lined with the *polytrichum* moss which seems to be always employed by the bird for this purpose. Mr. Ridgway found a nest containing five young birds on the Virginia shore, a little above Washington, June 12, 1875 (Field and Forest, Vol. I, p. 10). Several other nests have also been found in the neighborhood of Washington by Messrs. C. W. Richmond and M. Thompson (The Auk, Vol. V, p. 23). Mr. Scott reports having met with a young bird in the down, in Kanawha County, June 25, 1872.

242. **Helminthophila pinus.** Blue-winged Yellow Warbler.—Very rare spring and autumn migrant near Washington; specimens were taken in May, 1882. Dr. Fisher took two specimens in Virginia not far from the city, May 4th and August 26th, 1888. A nest containing four eggs about to hatch, was found by Mr. Herman H. Birney, very near Washington, early in June, 1880 (The Auk, Vol. V, p. 24). Mr. Doan has reported it from West Virginia.

243. **Helminthophila chrysoptera.** Golden-winged Warbler.—Rare spring and autumn migrant in the vicinity of Washington. Dr. Fisher captured an adult male in Virginia near the city, August 21, 1887. Said by Mr. Scott to be rare about Coalburg, West Virginia, in the summer of 1872, although several were observed. I have not met with it. Mr. Doan mentions having observed it at Fairmont, West Virginia. Dr. Brewer has remarked that Dr. Samuel Cabot was the first naturalist to meet with its nest and eggs which were found in May, 1837, in Greenbrier County, West Virginia. "The nest was constructed in the midst of a low bush on high ground, and contained four eggs" (History of North American Birds, Vol. I, p. 193).

244. **Helminthophila leucobronchialis.** BREWSTER'S WARBLER.—A typical male specimen of this bird was taken by Mr. William Palmer, May 15, 1885, near Fort Meyer, Arlington, Alexandria County, Virginia (The Auk, Vol. II, p. 304).

245. **Helminthophila ruficapilla.** NASHVILLE WARBLER.—Rare in the migrations. In the neighborhood of Washington, it has been not often met with, but was not uncommon in the spring of 1882. During Mr. Brewster's visit to Ritchie County, West Virginia, from April 25th to May 9, 1874, he reported one or two specimens seen every day but it was by no means common. Two specimens were obtained May 7th and May 8, 1883, by Rev. W. E. Hill near Fairview, Hancock County, West Virginia.

246. **Helminthophila celata.** ORANGE-CROWNED WARBLER.—An adult specimen of this bird was secured by Dr. A. K. Fisher at Munson's Hill, Virginia, on October 13, 1889 (The Auk, Vol. VII, No. 1, p. 96). Captain C. H. Crumb informs me of the capture of a specimen at Cobb's Island in the fall of 1887.

247. **Helminthophaga peregrina.** TENNESSEE WARBLER.—Said to be a very rare spring and autumn migrant around Washington. One was shot at Arlington, Virginia, by Mr. William Palmer, September 28, 1882. Mr. Doan says he obtained a young female near Fairmont, West Virginia, September 12, 1888.

248. **Compsothlypis americana.** BLUE YELLOW-BACKED WARBLER.—Common in the Virginias during the migrations, arriving in spring about the 20th of April; is seen in autumn until early in October. Many remain during the summer, especially in the mountain region, and doubtless breed.

249. **Dendroica tigrina.** CAPE MAY WARBLER.—Rare migrant in eastern Virginia. Drs. Coues and Prentiss report the capture of a single specimen at Washington, September 12th, 1859. In 1882 no less than nine specimens were captured in that neighbourhood during the second and third weeks in May. Dr. Fisher informs me that it is sometimes comparatively common in the fall near Washington. At Four Mile Run, Virginia, he took half a dozen specimens September 29th, 1889. I have met with several of these birds at Cobham, Albemarle County, early in May, in 1879 and 1884.

250. **Dendroica æstiva.** YELLOW WARBLER.—Common summer resident of the Virginias, more numerous in the migrations; arrives the latter part of April and leaves in September; breeds.

251. **Dendroica cærulescens.** BLACK-THROATED BLUE WARBLER.—Common in the Virginias during the migrations, the last week in April and the first half of May; in autumn seen in September and the first week in October. It is also a summer resident of the higher mountains, frequenting the brakes of Laurel (*R. Maximum*), and undoubtedly breeds there.

252. **Dendroica coronata.** YELLOW-RUMPED WARBLER.—Common in the Virginias during the migrations, many also wintering in the warmer districts. Numerous in spring, the last week in April and first two weeks in May. I have not observed it in winter in Albemarle County, although it lingers there late in autumn. Like the Cedar-bird it is partial to the berries of the Red Cedar (*Juniperus virginiana*).

253. **Dendroica maculosa.** MAGNOLIA WARBLER; BLACK AND YELLOW WARBLER.—Rather common migrant in the Virginias during the first three weeks in May; in autumn to be met with in September and early in October. Not hitherto reported in summer from the higher mountain region.

254. **Dendroica cærulea.** CERULEAN WARBLER.—Accidental or very rare in eastern Virginia. Mr. E. M. Hasbrouck took a male on Rock Creek in the District of Columbia, May 5, 1888, (The Auk, Vol. V, p. 323), and a female on the Virginia side of the Potomac, May 11, 1890, (The Auk, Vol. VII, p. 291). One is also reported by Mr. Jouy to have been seen at Arlington, Virginia, in the latter part of May, 1877. In West Virginia, Mr. Brewster found it in spring the commonest of its genus in Ritchie County, where it frequented the tops of the highest forest trees. Mr. Scott found it rare in Kanawha County where it confined itself almost exclusively to beech trees; fully fledged young were captured by him as early as June 29th. A beautiful specimen was obtained June 1, 1883, at Fairview, Hancock County, by Rev. W. E. Hill.

255. **Dendroica pennsylvanica.** CHESTNUT-SIDED WARBLER.—Common migrant at least in eastern Virginia, the first half of May and again in September. It was seen in the streets of

Washington in 1882. I learn from Mr. Frank M. Chapman that he captured a specimen in Virginia near Washington, as late as November 6, in 1887. It doubtless breeds in the higher mountain region. I have observed it on the Salt Pond Mountain in Giles County in June. In West Virginia, Mr. E. A. Brooks calls it rare in Upshur County and Mr. Brewster does not record it from Ritchie County. Rev. W. E. Hill saw this species at Fairview, Hancock County, May 16th and 17th, 1883.

256. **Dendroica castanea.** BAY-BREASTED WARBLER.—Rare migrant. It is said to be of uncertain occurrence in spring about Washington, but more numerous in autumn. Two specimens were observed and one taken by Mr. Ingersoll, May 14, 1875, near Petroleum, West Virginia.

257. **Dendroica striata.** BLACK-POLL WARBLER.—Abundant migrant near Washington in May, September and part of October. I have found it very common in Albemarle County. Mr. Freke only observed it in spring in Amelia County, and during several years not at all.

258. **Dendroica blackburniæ.** BLACKBURNIAN WARBLER.—Not uncommon in the Virginias during the migrations, in the first half of May and during September. Mr. Freke, however, never saw this species but once in Amelia County, a young male taken September 4th. I have met with it in July at an elevation of about 5,000 feet, near the summit of White Top Mountain, where it probably breeds.

259. **Dendroica dominica.** YELLOW-THROATED WARBLER.—Summer visitor. A specimen obtained near Washington in 1842 is in the collection of the United States National Museum. A young male was taken at Arlington, Virginia, September 7th, 1881, by Mr. William Palmer (Bull Nuttall Club, Vol. VIII, p. 253), who also found the species abundant at Cherrystone on the Eastern Shore in July, 1881. Numbers have been seen in May and June in different portions of Virginia by Lieutenant Wirt Robinson (The Auk, Vol. VI, p. 195). On July 28, 1889, Messrs. C. W. Richmond and J. D. Figgins captured five specimens at Four Mile Run, Virginia, and it is known to occur at Quantico, Prince William County (The Auk, Vol. VI, p. 339). I have met with Yellow-throated Warblers several times in April and May in Albemarle County, and on one occasion ob-

served it near Newport News. It is most frequently found among the pines. Mr. Scott has reported the capture of two Yellow-throated Warblers by Mr. W. S. Edwards in Kanawha County, West Virginia, in the month of July, and Mr. Doan says he found it elsewhere in the State. As far as is known, eastern Virginia specimens are true *dominica*. Some at least of the Yellow-throated Warblers in West Virginia will probably be found to be *D. dominica albilora*.

260. **Dendroica virens.** BLACK-THROATED GREEN WARBLER.—Common during the migrations in the Virginias from the end of April to the middle of May, and in autumn, in September and part of October. I found this species common in July near the summit of White Top Mountain, where it probably breeds.

261. **Dendroica kirtlandi.** KIRTLAND'S WARBLER.—A specimen of this rare warbler was shot by Mr. William Palmer, September 25th, 1887, on a wooded hilltop near Fort Meyer, Viginia, and a week later another bird of the same species was observed. Hitherto Cleveland, Ohio, has been the easternmost limit of the range of this species in the United States (The Auk, Vol. V, p. 148).

262. **Dendroica vigorsii.** PINE-CREEPING WARBLER.—Not very common summer resident in eastern Virginia, frequenting especially the pines. Mr. Richmond in his list of birds breeding in the District of Columbia calls it very rare in summer. I have met with it in Albemarle County and near Newport News. It arrives as early as March and remains until October. In West Virginia Mr. Brewster found a pair in Ritchie County on the 7th of May, apparently mated. Mr. Doan says that he met with it once near Parkersburg, and that Mr. Brown of that place has two specimens taken in July. (The Blue Mountain Warbler (*Dendroica montana*) said by Wilson to have been met with in Virginia near the Blue Ridge, has not been found by any other ornithologist.)

263. **Dendroica palmarum hypochrysea.** YELLOW RED-POLL WARBLER; PALM WARBLER.—Not common migrant in eastern Virginia in spring, arriving in April, and in autumn, leaving in October. I have observed Yellow Red-poll Warblers in Albemarle County and near Newport News in the former month. Drs. Coues and Prentiss call it rather rare near Washington.

Mr. Doan reports it from West Virginia. Specimens from eastern Virginia are probably referable usually to *hypochrysea*, but a typical specimen of *palmarum* was obtained near Washington, May 18th, 1881, by Mr. Lewis McCormick, and the latter form may be expected to occur in parts of West Virginia.

264. **Dendroica discolor.** Prairie Warbler.—Common summer resident in eastern Virginia, more numerous in spring, but locally distributed in bushes and scrub growth; arrives in April. Mr. Freke found a nest containing four eggs in Amelia County, June 1st, and Mr. Jamison (O. and O., Vol. IX, p. 144) found no less than nine, all containing eggs, in Fairfax County in the month of May. Mr. E. B. Coues has given a detailed account of the breeding of this species in Virginia near Washington (The Auk, Vol. V, p. 405). I have observed it in Albemarle County, in Botetourt County, and near Newport News, but have not succeeded in discovering the nest. Mr. Doan says he took a single specimen in Hampshire County, October 23, 1888.

265. **Seiurus aurocapillus.** Oven Bird.—Abundant summer resident throughout the Virginias, arriving about the middle of April and leaving in October; breeds. I have several times found the nest in Albemarle County in the month of May.

266. **Seiurus noveboracensis.** Water Thrush.—Not uncommon in the Virginias during the migrations in suitable localities; possibly a summer resident in the mountain region. Dr. A. K. Fisher has found it common in Virginia near Washington and has also taken it at Bull Run about three miles from Manassas Junction. According to Dr. Fisher it is one of our earliest migrants in the fall and he has taken it as early as August 5th. Drs. Coues and Prentiss (Avifauna Columbiana, p. 47) suggest that it may breed sparingly near Washington, but this is probably not the case. Mr. Brewster found it common in spring in Ritchie County, West Virginia, and Mr. Scott took a single specimen on the 8th of August in Kanawha County. Mr. Doan also mentions its occurrence in West Virginia.

267. **Seiurus noveboracensis notabilis.** Grinnell's Water Thrush.—Rare. Two specimens taken in Virginia, near Washington, May 11th, 1879, and May 5th, 1885, are in the collection of Mr. W. Palmer; it has not been previously recorded

from east of Illinois (The Auk, Vol. V, p. 148). Another was captured by Dr. A. K. Fisher, August 5th, 1886, not far from the Long bridge on the Virginia side of the Potomac.

268. **Seiurus motacilla.** Louisiana Water Thrush.—Rather common summer resident of the Virginias, arriving about the middle of April; breeds.

269. **Geothlypis formosa.** Kentucky Warbler.—Summer resident, rare in eastern, more abundant in West, Virginia. Mr. William Palmer obtained one on the Virginia side of the Potomac, August 19th, 1877, and two near Spring Vale, Fairfax County, May 14th and 15th, 1878. It has been known to breed in the vicinity of Washington. According to Mr. Scott it is common and breeds near Coalburg, West Virginia. Mr. Brewster found it rather common in Ritchie County, where he noted the time of its arrival as May 4th. Mr. Doan also has reported it tolerably common in other parts of West Virginia.

270. **Geothlypis agilis.** Connecticut Warbler.—Rare in the migrations in eastern Virginia. In May, 1879, one was taken at Falls Church by Mr. L. McCormick. It has not infrequently been observed in the neighbourhood of Washington, especially in the month of October. I have seen a specimen that was taken at Cobb's Island by Captain C. H. Crumb.

271. **Geothlypis philadelphia.** Mourning Warbler.—Rare migrant. One was obtained at Falls Church, Virginia, May 19, 1879; about eight specimens have been observed in the vicinity of Washington, according to Drs. Coues and Prentiss. I have met with one in Albemarle County on May 14, 1890. Mr. Doan reports the capture of a specimen at Fairmont, West Virginia, September 16, 1888.

272. **Geothlypis trichas.** Maryland Yellow-throat.—Common summer resident of the Virginias in swampy places arriving in the latter half of April and leaving in October; breeds.

273. **Icteria virens.** Yellow-breasted Chat.—Common summer resident of the Virginias in thickets and swamps, arriving in April and leaving in September; breeds.

274. **Sylvania mitrata.** Hooded Warbler.—Common summer resident of the warmer parts of the Virginias; breeds. Said to be rare about Washington; one was seen in his yard in

that city by Professor S. F. Baird in the spring of 1882. It arrives in Albemarle County where it is abundant, the last week in April. I found a nest containing four eggs at Cobham, Virginia, May 28, 1888; it was placed in a small Kalmia bush. Mr. Scott has also recorded it as breeding in Kanawha County. I have noted this species on the slopes of the mountain at the Blue Ridge Springs, Botetourt County, at an elevation probably of from 1,500 to 2,000 feet.

275. **Sylvania pusilla.** WILSON'S WARBLER.—Rare in the migrations. Has been often found in the neighbourhood of Washington; Dr. Fisher has observed it along the Virginia shore of the Potomac. Observed at Fairview, West Virginia, by Rev. W. E. Hill May 17th, 1883 (O. and O., Vol. IX, p. 89). Mr. Doan says he found it occasionally in the Ohio valley in September, 1888.

276. **Sylvania canadensis.** CANADIAN WARBLER.—Rather common migrant in the Virginias. Abundant about Washington, where it is said to arrive in spring the last week in April, in autumn departing late in September. I have found it common in Albemarle County, where I have not observed it before the early part of May. Reported by Rev. W. E. Hill as usually abundant at Fairview, West Virginia in the spring migration; it arrived there May 19th, 1883, and was seen as late as May 24th. It was not observed by Messrs. Scott and Brewster in Kanawha and Ritchie Counties. It undoubtedly breeds in the higher Virginia mountains where I have seen it in early summer.

277. **Setophaga ruticilla.** REDSTART.—Common migrant and summer resident of the Virginias, arriving in spring the last week in April, and leaving in the autumn in September. It breeds in in many localities but is more numerous during the migrations.

278. **Anthus pensilvanicus.** TITLARK. Winter resident of the Virginias, more common in the migrations. Drs. Coues and Prentiss report it as abundant in flocks near Washington in winter. Mr. Freke has reported it from Amelia County. I once observed a flock in Albemarle County in November. Rev. W. E. Hill mentions having seen three or four together, May 8, 1883, and reports it as a spring migrant (O. and O. Vol. IX, p. 88).

Mr. E. A. Brooks reports it to be rare in Upshur County, West Virginia. It is probably most numerous near the coast.

279. **Mimus polyglottos.** Mocking Bird.—Common summer resident of the Virginias, especially in the southeastern counties, many also being found in winter. Rare or unknown in the mountain region; breeds.

280. **Galeoscoptes carolinensis.** Cat Bird.—Abundant summer resident of the Virginias, arriving the latter part of April and leaving in October; breeds.

281. **Harporhynchus rufus.** Brown Thrush.—Common summer resident of the Virginias, varying, however, in abundance in different localities; breeds. It usually arrives early in April and leaves in October. Mr. Freke mentions that it has been seen in Amelia County as early as March 18, and is not sure that a few do not pass the winter. Unlike the Mocking bird it is common in the mountain region.

282. **Thryothorus ludovicianus.** Great Carolina Wren.—Common resident of the Virginias; breeds.

283. **Thryothorus bewickii.** Bewick's Wren.—Rather common in summer in the mountain region (including the Blue Ridge); rare in other parts of the Virginias. An adult male was taken at Arlington, Virginia, April 10th, 1882, by Mr. William Palmer, (Bull Nuttall Orn. Club, Vol. VIII, p. 253). I have observed it on the slopes of the Salt Pond Mountain, and have found it near Rockfish Gap in the Blue Ridge, as well as in the beautiful field which forms the summit of Humpback Mountain, where it was quite abundant. It also occurs at the Blue Ridge Springs in Botetourt County. These wrens are rather locally distributed, and frequent especially clearings in which the trees have been "girdled" and where old stumps and piles of brush abound. In western North Carolina Mr. Brewster found it abundant in towns and villages, where it appeared to be the "House Wren" of that region. Audubon gives an account of this wren furnished him by Dr. Bachman, who observed it frequently in the Virginia mountains in the summer of 1835. Mr. Doan mentions having seen a few in West Virginia. It is an early breeder, as the young are quite well grown by June.

284. **Troglodytes aedon.** House Wren.—Common summer resident of the Virginias in the neighborhood of villages

and farm buildings; breeds. It usually arrives in April and leaves in October.

285. **Troglodytes hiemalis.** WINTER WREN.—Uncommon winter resident of the Virginias. It is probably to be found also in summer near the tops of the highest Virginia mountains.

286. **Cistothorus stellaris.** SHORT-BILLED MARSH WREN.—The authority for the occurrence of this species in Virginia is Mr. Freke who speaks of having occasionally met with it in Amelia County on the margins of swampy ponds (Birds of Amelia County). Mr. Freke does not mention *C. palustris*. The capture of a female specimen at Washington has recently been reported by Mr. E. M. Hasbrouck (The Auk, Vol. VII, p. 291).

287. **Cistothorus palustris.** LONG-BILLED MARSH WREN.—Common summer resident of the marshes of Tidewater Virginia, arriving the latter part of April and departing in October; breeds abundantly near Washington. I once saw a stray one in Albemarle County. It is said by Mr. Doan to be tolerably common along the banks of the Ohio and Great Kanawha Rivers.

288. **Certhia familiaris americana.** BROWN CREEPER.—Common winter resident of the Virginias. I have met with it in July on White Top Mountain in south-western Virginia, where it probably breeds. It will doubtless be found in summer in other parts of the higher mountain region.

289. **Sitta carolinensis** WHITE-BREASTED NUTHATCH.—Common resident of the Virginias, less numerous in summer; undoubtedly breeds.

290. **Sitta canadensis.** RED-BREASTED NUTHATCH.—Not common winter resident. Mr. Freke met with it only once in Amelia County on January 10th, during very cold weather. It has also been recorded from Upshur County, West Virginia. I have never met with it in Albemarle County. It is reported to be not common around Washington, where it frequents especially pine woods. I found it common in July on WhiteTop Mountain, above the elevation of 4,000 feet. It doubtless breeds in that locality.

291. **Sitta pusilla.** BROWN-HEADED NUTHATCH.—Resident in the Tidewater region. Not uncommon in Northampton County, where Captain C. H. Crumb has found several sets of the

eggs. It is mentioned by Drs. Coues and Prentiss as occurring in the Dismal Swamp, and is, I believe, found at Point Lookout, Maryland, at the mouth of the Potomac.

292. **Parus bicolor.** Tufted Titmouse; Tomtit.—A common resident of the Virginias, noticeable for its loud whistling notes; breeds. The nest which is made in holes in trees is not easy to find. I have found it once in Albemarle County.

293. **Parus atricapillus.** Chickadee.—Rare winter visitor in Virginia in the neighborhood of Washington. Specimens have been taken by Mr. William Palmer at Arlington and Falls Church. Rev. W. E. Hill of Fairview, Hancock County, West Virginia, mentions this species, possibly not discriminating between it and *P. carolinensis*, (Ornithologist and Oölogist, Vol. IX, p. 46). It may yet be found in summer in the higher mountain regions.

294. **Parus carolinensis.** Carolina Chickadee.—Common resident of the Virginias; breeds.

295. **Regulus satrapa.** Golden-crowned Kinglet.—Common winter resident of the Virginias from October to April. I have found it in the balsams at the summit of White Top Mountain (5,673 feet) in July. It probably breeds there.

296. **Regulus calendula** Ruby-crowned Kinglet.—Common in the Virginias during the migrations; in spring during April and the first week in May, in autumn in October and the early part of November.

297. **Polioptila cærulea.** Blue-gray Gnatcatcher.—Common summer resident of the Virginias except in the mountain region, arriving about the 1st of April and leaving at the beginning of October; breeds. Dr. Fisher informs me that he watched a Gnatcatcher at work on its nest at Gainesville, Prince William County, May 15, 1887.

298. **Turdus mustelinus.** Wood Thrush.—Common summer resident of the Virginias; breeds abundantly in Albemarle County; arrives in April and leaves in October.

299. **Turdus fuscescens.** Wilson's Thrush.—Reported by Drs. Coues and Prentiss to be a rather uncommon migrant near Washington. I have also found it not common in May in Albemarle County. Mr. Brewster mentions that a single pair

was noted by Mr. Deane at Petroleum, Ritchie County, West Virginia. It probably will be found breeding in the higher mountain regions.

301. **Turdus aliciæ**. GRAY-CHEEKED THRUSH.—Probably not uncommon migrant in eastern Virginia. It is common near Washington, and appears to remain later in spring than the Olive-backed; Dr. Fisher has observed it as late as the first of June. It is also found in Albemarle County, but has not yet, as far as I am aware, been reported from West Virginia.

302. **Turdus ustulatus swainsonii**. OLIVE-BACKED THRUSH.—Abundant migrant, at least in eastern Virginia, from the end of April to the latter part of May in spring, and in September and October in autumn. Mr. Brewster also found it numerous in Ritchie County, West Virginia.

303. **Turdus aonalaschkæ pallasii**. HERMIT THRUSH.—Common in the Virginias during the migrations. Some are found in winter in the warmer districts. Mr. George Shoemaker has reported them as common in the District of Columbia and Alexandria County, Virginia, in the winters of 1879-80 and 1880-81 (Bull Nuttall Orn. Club, Vol. VI, p. 113).

304. **Merula migratoria**. AMERICAN ROBIN. Common summer resident of the Virginias, in many districts resident; most numerous in the migrations; breeds. In the warmer parts of the Tidewater region it is rare in summer, but is common in the mountain region at that season.

305. **Sialia sialis**. BLUE BIRD.—Common summer resident of the Virginias, resident in the warmer districts; breeds.

NOTES.

Pp. 34-39. Dr. C. H. Merriam, in a very important recent publication (U. S. Depart. of Agriculture, North American Fauna No. 3, Sept. 11, 1890), concludes that the so-called Eastern, Central and Western Provinces of the United States, hitherto accepted by naturalists, must be abandoned and that there are but two primary life areas in extra-tropical North America which he terms the Boreal and the Sonoran Provinces.

The Austro-riparian division is to be regarded as one of the six sub-regions of the Sonoran Province. "The Carolinian Fauna is a northward extension of the Austro-riparian, while the Alleghanian is neutral ground between the latter and the southernmost division of the Boreal Province (the Canadian Fauna)."

P. 48. The King Eider has lately been taken at Brunswick, Ga., by Mr. W. W. Worthington (The Auk, Vol. VII, p. 289).

P. 74. A specimen of *Junco hyemalis shufeldti* was taken near Laurel, Md., April 28, 1890, by Mr. A. W. Ridgway. (The Auk, Vol. VII, p. 289).

HYPOTHETICAL LIST OF ADDITIONAL SPECIES.

1. *Stercorarius pomarinus.* Pomarine Jaeger.
2. *Stercorarius parasiticus.* Parasitic Jaeger.
3. *Stercorarius longicaudus.* Long-tailed Jaeger.
4. *Larus franklinii.* Franklin's Gull.
5. *Sterna sandvicensis acuflavida.* Cabot's Tern.
6. *Sterna paradisæa.* Arctic Tern.
7. *Sterna fuliginosa.* Sooty Tern.
8. *Puffinus borealis.* Cory's Shearwater.
9. *Puffinus major.* Greater Shearwater.
10. *Puffinus audubonii.* Audubon's Shearwater.
11. *Puffinus stricklandi.* Sooty Shearwater.
12. *Oceanites oceanicus.* Wilson's Petrel.
13. *Phalacrocorax carbo.* Cormorant.
14. *Fregata aquila.* Man-o'War Bird.
15. *Anser albifrons gambeli.* American White-fronted Goose.
16. *Olor buccinator.* Trumpeter Swan.
17. *Guara alba.* White Ibis.
18. *Plegadis autumnalis.* Glossy Ibis.
19. *Grus americana.* Whooping Crane.
20. *Crex crex.* Corn Crake.
21. *Crymophilus fulicarius.* Red Phalarope.
22. *Phalaropus tricolor.* Wilson's Phalarope.
23. *Recurvirostra americana*, American Avocet.
24. *Himantopus mexicanus.* Black-necked Stilt.
25. *Macrorhamphus scolopaceus.* Long-billed Dowitcher.
26. *Micropalama himantopus.* Stilt Sandpiper.
27. *Tringa maritima.* Purple Sandpiper.
28. *Tringa fuscicollis.* White-rumped Sandpiper.
29. *Tringa bairdii.* Baird's Sandpiper.
30. *Symphemia semipalmata inornata.* Western Willet.
31. *Tryngites subruficollis.* Buff-breasted Sandpiper.
32. *Catharista atrata.* Black Vulture.

33. *Dryobates villosus audubonii.* Southern Hairy Woodpecker.

34. *Acanthis linaria.* Redpoll.

35. *Ammodramus caudacutus nelsoni.* Nelson's Sparrow.

36. *Ammodramus caudacutus subvirgatus.* Acadian Sharp-tailed Sparrow.

37. *Dendroica montana.* Blue Mountain Warbler.

38. *Dendroica palmarum.* Palm Warbler.

39. *Dendroica dominica albilora.* Sycamore Warbler.

40. *Turdus aliciæ bicknelli.* Bicknell's Thrush.

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